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DEVOTED TO DISEASES OF THE

NOSE - THROAT - EAR

FOR CONTENTS SEE NEXT PAGE.

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ORIGINAL COMMUNICATIONS.

THE TEXAS SCREW-WORM AND ITS INVASION OF THE NASAL CAVITIES.

BY M. A. GOLDSTEIN, M.D., ST. LOUIS.

Considerable interest has been manifested of late by the publication of a number of reports of cases from different sections of the country, describing the invasion of the human tissues, especially the nasal mucosa, by the larvæ or maggots of various species of fly.

Of the insects, whose larvæ have most frequently been described as attacking and infesting the human, may be mentioned those of the common blow fly, *Calliphora Vomitoria*, and especially those of the so-called Texas screw-worm, *Compsomyia* (*Lucillia*) *Macellaria*.

Entomologists and scientific observers have traced the first habitat of the *Compsomyia* (*Lucillia*) *Macellaria* to Mexico and South America. However, Dr. Williston, of Yale College, now writes that "it occurs everywhere from Canada to Patagonia."

Its centralization in North America seems to have been in the State of Texas, and from its common occurrence there, its frequent ravages among cattle, and its occasional invasion of the human family, together with the morphology of the larvæ, it has received the appellation of *Texas Screw-Worm Fly.*

Its effects were never seriously felt outside of Texas until the season of 1890. About this time the presence of this insect pest was reported from several localities in its ravages among cattle.

While this insect invader carries on its greatest work of destruction among cattle, it is of utmost importance for our rhinologists and aurists to be sufficiently conversant with the science of entomology to know that this pest will occasionally attack the human family, and several deaths have been recorded as the result of its invasion. Suffice it to say that the cavities of the head, especially those of the nose and ear, are usually the seat of invasion; this is more likely to occur when there exists a foul-smelling otorrhœa or ozœna. "It is one of the main characteristics of this fly that it is readily attracted by the odor of decaying animal and vegetable matter, and feeds very voraciously upon these until satisfied."

Observations and experiments have been made to establish the fact that the screw-worm fly will deposit her eggs upon decaying animal and vegetable matter, and that the maggots will thrive and mature in this substance.

In December, 1891, I instituted a series of personal investigations in a case of this character, which was placed in my charge at St. John's Hospital, of St. Louis.

As this case and the accompanying notes have never been published, I find this an opportune occasion for presenting the article:

A French farm laborer, æt. fifty years, a resident of East St. Louis, applied at the clinic for the relief of sudden and acute nasal pain. He gave the following brief account of the trouble: For several nights previous he had been sleeping in a hammock or on a bench in the open air, in the vicinity of a stock farm, to escape the intense summer's heat. During the last night he was awakened by a tickling sensation and buzzing in his nose, and on applying his hand, thought that he brushed away a large fly. There being no further disturbance, he continued his slumbers. On awaking the next morning there was a feeling of fullness in the nose, for which the patient could not account. For about five years he had had a chronic nasal catarrh, and considerable odor and discharge had been noted of late. From the details related, I also concluded that the nasal trouble was of a specific character, and that some necrosis of the nasal tissues must have taken place.

On examination, under reflected light, the entire left cavity of the nose was seen filled with a dense, light yellow mass. On removal of some of this for closer inspection, its composition was readily detected as that of a mass of eggs of some insect, later deter-

mined as those of the *Compsomyia* (*Lucillia*) *Macellaria*. Having some slight knowledge of the science of entomology, the serious nature of the case was recognized without delay, and steps were taken for the immediate removal of this mass of ovæ from the nose. With a blunt curette every visible portion of eggs was removed. Syringing or washing of the nasal cavities was avoided, as it was feared the force of the current might carry some of the eggs higher up into the nasal spaces. An actual count of the mass of ovæ removed showed the presence of over 500 single eggs. A careful inspection, after a thorough cleansing of the cavities, revealed a clear naris and it was supposed that the trouble had been eradicated. Extra precautions were taken, however, by advising the patient to use an antiseptic spray repeatedly.

Forty-eight hours later the patient again presented himself at the clinic; this time with his nose in a violent state of acute inflammation, complaining of excruciating pain, entire occlusion of nasal respiration and a sensation of "something moving" high up in the nasal cavity. Inspection revealed an intense infiltration of the mucous tissues, and an examination of the deeper areas of the nose was thus made impossible. After considerable difficulty, a small pledget of cotton, saturated in ten per cent. cocaine, was inserted. On second inspection, a group of round, glistening bodies, exhibiting some slight movement, were noticed deeply imbedded in the nasal mucosa. These were soon determined to be the ends of the recently developed screw-worms. As many of these as could be seen were removed with a mouse-tooth forceps. Dating from the history of the case, these maggots were about three days old, measured nearly one-half inch in length, and, judging from the life history of these larvæ, were about half matured. A point, worthy of notice, was the tenacity with which this larva clung to the mucous membrane when attempting removal with the forceps. It was feared that a number of these maggots had crawled beyond the reach of the instruments and had possibly found their way into the frontal sinus.

The patient was from this time on kept under almost constant observation at St. John's Hospital. In repeated sittings throughout the day, as soon as a maggot crawled into sight, it was seized with the forceps and removed. From day to day, the increase in the size of the larvæ was apparent.

Four days after the invasion of the host, the most serious aspect of the case developed. The nose and the surrounding areas of the face were swollen to an intense degree, the outer tissues red and infiltrated, the patient suffering fearful pain. In addition to this array of symptoms, facial erysipelas was threatened.

The region of the frontal sinuses showed the same glazed and swollen condition of the skin and the patient complained of the most intense pain in this area.

The ears were also involved through an extension of the inflammation through the posterior nares to the orifices of the Eustachian tubes. The patient had a temperature and pulse resembling that of septic fever.

The odor was exceedingly foul; there was complete nasal occlusion; the pharynx was swollen; palate and uvula ædematous. A number of the maggots found their way to the posterior nares and were "hawked" out by the patient.

On the sixth day, a point of fluctuation was observed in the greatly swollen skin of the dorsum of the nose, at about its center. A free incision was made, and a quantity of foul-smelling pus escaped. After the pus had been washed away, three fully-developed, live screw-worms were removed with the forceps. Examination with the probe revealed a communication with the nasal passages, which had been made by the boring of the maggots. A free drainage was now established, and the involved area was henceforth under better control. Potassium permanganate and two per cent. carbolic acid solution were the irrigating fluids used. During the next two days, twelve full-grown screw-worms were removed from time to time, some through the nares, and several from the outer wound. The nose was irrigated every three or four hours.

There was considerable suppuration and some sloughing of the mucous tissues which had been invaded.

The swelling, a fever and inflammatory reaction gradually subsided, and in three weeks the patient was discharged from the hospital.

It is interesting to note that the olfactory function, which had been completely held in abeyance, was fully restored and with the exception of a profuse discharge and sensitiveness of the entire nasal respiratory tract, for which patient was treated about two months, no further difficulties were observed.

Every antiseptic at command was tried, with the object in view of stupifying or killing the larvæ, but apparently without avail.

Antiseptics and germicides, which might have been efficacious in destroying the maggots, were scarcely found applicable, as the delicate tissues of the nasal cavities could not tolerate them.

In the disposal of the living maggots which I extracted with the forceps, it occurred to me to investigate the efficacy of the various remedies used for the destruction of the screw-worm.

The bulletins of the Louisiana and Texas State Experiment Stations (Department of Agriculture) on this subject are complete in every detail, yet the remedies which are described in the bulletins as being of value in the destruction of the screw-worm in cattle (chloroform, ether, carbolic acid, bichloride of mercury, turpentine, etc.,) were irritants and caustics of too powerful and destructive character to be used on the human mucosa.

I have tried all the enumerated materials, and my experiments scarcely tally with those of the bulletins.

For example, I have found the fully-matured maggot to live for four minutes in pure carbolic acid; in strong turpentine, for fifteen minutes. Chloroform has proved most satisfactory, as an exposure of thirty seconds to the atomized vapor invariably killed the worm. My observations in this direction were published in *Insect Life*, Vol. iv., Nos. 7 and 8 (U. S. Department Agriculture, Division of Entomology), in correspondence dated Dec. 13, 1891.

For the destruction of the screw-worm two factors must be taken into consideration: (1) The stupefaction or death of the worm. (2) The effect upon the wound that the agents necessary to destroy the maggot would have.

Of course, it is unnecessary to add that it is impossible to apply the powerful chemicals here enumerated, in the pure form, in the delicate areas of the nasal or aural cavities; again, in a diluted form, such remedies would fail to destroy a maggot of such wonderful vitality.

To demonstrate the vitality of the screw-worm, I may add that they crawled for several minutes over a surface strewn to the depth of one-eighth inch with pure calomel.

By actual count, over three hundred individual larvæ were removed in this case. This includes the large masses of small maggots removed in bunches with the curette and the fully-matured screw-worms removed singly or in small numbers by chloroform, the forceps, and the hawking and blowing efforts of the patient.

About fifty of the full-grown larvæ were kept alive and under observation. Many of these were used for experimentation, and some were observed as they assumed the pupa or chrysalis condition.

The fully-matured larva or maggot is three-fourths of an inch in length and about one-eighth inch in diameter. The body, of a creamy-white color, is made up of segments, while between each segment is a ring of bristles which causes the maggots to resemble a screw, and from this its name is derived.

To complete the sketch, the accompanying illustrations are added, showing the *Compsomyia* (*Lucillia*) *Macellaria* in its various stages.

Fig. 1.

Fig. 2.

Fig. 3.

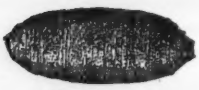

Fig. 4.

Fig. 5.

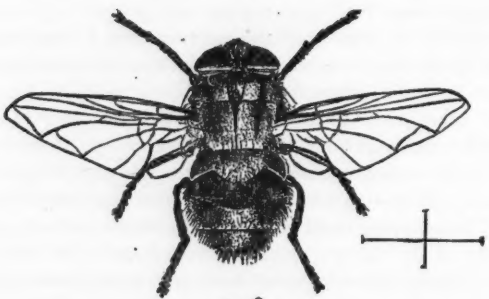

Fig. 6.

Fig. 1—Single egg, greatly enlarged. Fig. 2—Bunch of Eggs. Fig. 3—Larva ("Screw-Worm"). Fig. 4—Pupa, or Chrysalis. Fig. 5—Pupa-case, showing broken end where fly emerged. Fig. 6—Screw-Worm Fly, wings expanded.

(The illustrations have been taken from photo-engravings published in the bulletin of the Texas Agriculture Experiment Station, 1890.)

REPORT OF A CASE OF TWO HUNDRED AND SEVEN SCREW-WORMS TAKEN FROM THE NOSE.

BY HAL FOSTER, A.B., M.D., KANSAS CITY, MO.

Laryngologist to St. Margaret's Hospital.

A brief report of the above case will be interesting on account of its rarity.

On Sept. 28, I was requested to examine the nose of a woman admitted to St. Margaret's Hospital—Mrs. M., of this city, aged fifty years. She was a small, delicate Irish woman and kept house for a brother near the Missouri river. She had been under a physician's treatment for epileptic seizures for years, with some benefit. She had also been a victim of atrophic rhinitis for years. Notwithstanding the diseases, she was a hard-working woman and did washing, cooking, etc. About two weeks prior to her admission to the hospital she was seized with an epileptic convulsion while out in her little yard; being alone, she had no idea how long she was in that condition. Twenty-four hours later there seemed to be an itching of the nasal membranes, accompanied with frontal headache and paroxysms of sneezing. Her friends informed her that she had hay fever, and advised large doses of quinine, which she took for two days without any relief. The nose now began to bleed; this was followed by a very offensive discharge. The eyes and face were so badly swollen that she could scarcely see. She was unable to sleep. The purulent discharge from her nose was exceedingly offensive. I placed a Myles speculum in her nose and, by means of a good light, saw the entire nostrils filled with screw worms. With the aid of the Sister in charge, 207 were removed from the woman's nostrils. Inhalations of chloroform were used and the worms came out in great quantities. Equal parts of chloroform and hot water were syringed into both nostrils with telling results on the worms. The chloroform seemed to kill them immediately and I was then able to pick them out with forceps. There was a tumor on the front of the nose, caused by the worms sawing their way through. They had extended behind the palate, but had not entered the sinuses. The destruction of tissue was very great; the temperature was 102° F.

After they were all removed, her nose was washed out with peroxide of hydrogen. Weak solutions of formalin were used twice daily; campho-phenique was also used every morning; antiseptic ointments were inserted into the nose every night. Tonics of iron

and strychnia were given with a nourishing diet. It was several days before she was able to swallow even liquid food without pain; this pain was overcome by the local use of eucaine. It took nearly six weeks for the old lady to get strong enough to leave the hospital.

She was placed on appropriate treatment for the catarrhal condition, and is now able to attend to her household duties.

Formalin, campho-phenique and chloroform are the best agents I know of to destroy these worms.

The screw fly deposited the larvæ in my patient's nose, where they rapidly developed. I have seen these worms in squirrels in the far South. They also frequently deposit their larvæ in the ears and nostrils of hogs and sheep. They are found in warm, dry climates. These flies are, in some localities, called saw flies, on account of their sawing motions while attacking their victims. They belong to the Hymenopterous or Tenthredinidal family, and during the hot, dry seasons frequently destroy animals and occasionally human beings. Twenty-four to forty-eight hours are required for the larvæ to hatch and immediately after their work of destruction begins.

Several years ago I had two other cases under my care. One was in a man suffering from chronic otorrhœa of the left ear. He became intoxicated and lay in a stable all day; while in that condition the larvæ was deposited in his ear. The patient came under my care forty-eight hours later, too early for the worms to have done much damage. In this case I was able to pick them out by means of forceps—they were three in number. Chloroform was used in his ear in order that any larvæ remaining might be destroyed.

The other case occurred in a woman suffering from atrophic rhinitis. They were removed early and were only five in number. In all cases reported the patients seem to have been sufferers of some chronic nose or ear disease, accompanied with bad odors.

When these worms are fully developed they saw their way through bony structure, enter the sinuses and even the brain. The late Dr. MacKenzie reports a number of cases where the patients had died of meningitis, caused from worms in the nose. His cases came from India. Farmers and stockmen have informed me that they were quite common in cattle in the Indian Territory.

When the worms are first discovered in the nose or ears, great care should be used to destroy the larvæ. In order to do this, some of the drugs named should be used, even after those in sight have been removed; by this treatment any remaining unseen will be killed.

In all of my patients the worms had caused great shock to the nervous system.

REPORT OF A CASE OF WORMS IN THE NOSTRILS, OR PEENASH.

BY J. S. STEELE, M.D., MONTEREY, MEXICO.

Consulting Oculist, Mexican National R. R.

In the October number of THE LARYNGOSCOPE a case of worms in the nose was reported as being one excitant in recurring epistaxis. Of course, worms in the nose will cause epistaxis, and I believe *continuous*, *not* recurring, until either patient or worms are dead. During the past summer I was called to see an engineer who was suffering with severe frontal headache, especially between the eyes, and a continuous dropping of a sanguinous fluid from the nose. On examination, found the nose literally alive, so to speak, with worms. The subjective symptoms had lasted for three days. After removing a few of the maggots with forceps, not having chloroform, I blew calomel up each nostril, and left patient, to return in two hours, when I found patient free from pain and a decrease in amount of discharge. By the aid of a douche, succeeded in washing out about one hundred worms, after which I placed a piece of cotton, saturated with chloroform, up each nostril, instructing patient to hold his nose and blow, as in inflating the middle ear, which performance was repeated several times at two different sittings, with the result of completely ridding the man of his unwelcome visitors and their attendant symptoms. Patient was suffering with specific nasal catarrh, with necrosis. etc. On questioning him, he stated that four days previous, while strolling around the plaza, a fly had flown into one of his nostrils, and that he had immediately blown it out of the other, remarking at the time, to a friend, of his ability to do so.

IMPAIRED VENTILATION AND DRAINAGE OF THE NOSE THE MOST COMMON CAUSES OF NASAL CATARRH.*

BY EDWIN PYNCHON, M.D., CHICAGO, ILL.

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The physiology of the nose was, until recent years, but imperfectly understood. Text books on physiology, of but little more than a quarter of a century ago, taught that the nose was the organ of smell and the passage through which respiration was conducted, and nothing more. No hint was given that any effect upon the air was derived from its passage through the nose. No mention was made of the sounding-board influence of a patent nose upon the voice. In those days the pathology of nasal catarrh was quite in keeping with the meagre knowledge extant as to the physiological uses of the nose. The good old family physician then regarded nasal catarrh as being practically incurable and largely dependent upon mal-condition of the stomach, or else a result of general poor health, and believed that the only treatment which would give promise of improvement or cure was vigorous internal medication of a powerful alterative and tonic character. Hence, as might be readily inferred, with such a faulty pathology, associated with such an imperfect idea as to the physiology of the nose, the treatment of nasal catarrh was so unsatisfactory that it became the opprobrium of the practice of medicine.

At last a change came in medicine, as regards the nose, and its anatomy was more carefully studied. Advances were also made in the study of nasal physiology, and it was learned that the nasal fossæ were something more than simply two "blow holes" for convenience in respiration. Different investigators have independently made a careful study of the nose, and, as their several results have in the main agreed, we now know approximately the form and character of a perfect nose, which, if even seldom met with, we should always keep in our mind's eye as an ideal standard. Our ideas of nasal physiology are also crystalized into a rational form.

In an ideal nose the two fossæ are identical in size. The septum is vertical and its walls nearly plane. It is not deformed by bony,

*Read before the Chicago Medical Society, November 24, 1897.

cartilaginous or soft growths of exuberant tissue, rhinologically known as exostosis, enchondromata, etc. The turbinated bodies are of symmetrical shape, and in no case at any point should they touch the septum. Through the tortuous convolutions of these bodies the area of the nasal mucous membrane is materially increased. The inferior meatus should be clear and the inferior turbinal should never touch the floor of the nasal passage. The middle meatus should also be clear—meaning that at no point should the inferior and middle turbinals touch each other. The superior meatus should likewise be free and there should be enough free space for the so-called superior turbinal, and even for a fourth turbinal, if such anomaly be present. This upper portion of the nose may be called the nasal attic and its proper shape and condition is of more importance in the consideration of nasal catarrh than has been generally appreciated.

Finally, as a result of the combination of the requirements noted, we find that in an ideal nose no two adjacent or opposing surfaces should ever touch each other at any point or at any time. The amount of free space required about the turbinal varies with its location. The turbinals may be regarded as erectile structures, the inferior possessing the power of distention to a marked degree, and hence requires more free space about it than does the middle turbinal, the most erectile portions of which are the inferior surface and posterior end. By anterior rhinoscopy a normal inferior turbinal is found to have about it, when most shrunken, a space of not less than $^1/_8$ to $^3/_{16}$ inch, while the space between the septum and the middle turbinal is about $^1/_{16}$ inch. Such free space about the turbinals is required in order that they may have sufficient room in which to swell. When, owing to growths upon the septum or to a deflection thereof, or any other cause or causes, such space is not given, contact, even if not continuous, occurs periodically, or whenever swelling of the turbinals takes place. In this way is explained the great susceptibility of many patients to frequent attacks of coryza and also why stoppage of the nose is so often complained of when the patient is in the recumbent posture, which position tends to increase turbinal congestion. Contact in one nostril generally means contact at some point in the other nostril, hence alternating stenosis is frequently noted. When the nasal spaces are materially increased in size beyond the normal, it causes the disadvantages of atrophy and is even a greater defect than is stenosis. When the two nares are unequal in size, one being stenosed, the other is compelled to do the greater part of the work and may be so overworked that it cannot properly fulfill its physiological functions. While secreting only enough nasal

fluid to properly humidify one-half of the air inspired, it is giving entrance to much more than half of the air required; hence this air is not sufficiently humidified, and, as it enters in a larger column, it is likewise not so well warmed. Furthermore, the increased volume of air entering tends to dry the mucous membrane to an abnormal degree and is therefore harmful.

Through the mobility of the alæ nasi, in combination with those slight growths upon the cartilaginous septum which are so frequently met with, a certain degree of anterior stenosis is as often observed, being usually more pronounced during inspiration than during expiration. Anterior nasal stenosis tends to produce posterior congestion, for, when present, the air in the post-nasal space during respiration is alternately rarified and condensed, the same as though it were being operated upon by an air pump, hence a hyperæmia is kept up which in time may result in posterior turbinal hypertrophies or posterior enlargements upon the vomer. Varying air pressure in the post-nasal space has long been recognized as being a frequent cause of Eustachian tubal congestion and catarrh. A stenosis of one nostril will frequently cause a hyperæmia of the other nostril even though it be free from structural defect.

Connected with the nose by suitable openings are several accessory cavities, the perfect drainage of which is dependent upon proper potency of the nasal meatuses and, in fact, of the entire nasal fossa. Physiological research has established the fact that the most important function of the nose is to warm and humidify the air inspired. By being warmed the air is also slightly rarified. Of course it is additionally known that large particles of floating matter are caught by the hairs located near the external meatuses, that small particles of dust become attached to the mucous membrane through the tenacity of the nasal secretion, and are in due time blown into the handkerchief; also that noxious vapors and gases cause sudden swelling of the turbinals, increase the flow of nasal secretion, and often provoke protective sneezing.

In a healthy adult nose the quantity of the nasal secretion approximates one pint each twenty-four hours, and its character is watery and of a specific gravity of about 1015°. The quantity mentioned—one pint—is none too great to properly humidify the large quantity of air inspired. Taking for an average 18 respirations per minute, we have 1,080 per hour, 25,920 per day, 9,467,280 per year, and so on through life, and, as at each breath in the adult male, there is taken into the lungs, on an average, one pint or 20 cubic inches of

air, we have 12½ cubic feet per hour, 300 cubic feet per day, and 109,575 cubic feet per annum, or enough to fill a cistern 60 feet square and over 30 feet in depth.

In order that this vast quantity of air may easily pass through the nose and be properly prepared for the lungs, it is essential that the nasal fossæ be free and unobstructed by deformities. If the requirements, as previously given, are fulfilled, viz: there being in every case a sufficient space between opposing surfaces, and in no case two opposing surfaces touching each other, the entering air will freely pass through all parts of the nasal fossæ, including the deep recesses of the meatuses, so that every part thereof will be thoroughly and perfectly ventilated, and, as a result, the nasal secretion will be continuously evaporated so there will be no opportunity for it to thicken and become a catarrhal discharge.

In addition to the prevention of evaporation through contact of two opposing surfaces, drainage is likewise at the same time impaired. Growths upon the septum, even when no contact exists, by destroying the symmetry of the passage, interfere with drainage, particularly when the patient is in a recumbent posture, and in this way cause, through the accumulation of secretion at such points, a thickening thereof which in turn prevents the required evaporation.

A second result of the touching of parts in the nasal passages is the production of a condition of inflammation of the membrane which in time becomes chronic, and which changes the character of the secretion, rendering the evaporation thereof more difficult and thus increasing the tendency to catarrhal decomposition and discharge.

Through the increased sensitiveness associated with such inflammation, we often have an explanation for the manifestations of hay fever, asthma, etc., which, regardless of any concomitant uric acid condition, are best relieved by such surgical steps as will insure perfect intranasal ventilation and drainage.

The excitation of cold, or of dust, or any other irritating quality of the air being inspired, causes a swelling of the turbinals through a congestion of the capillaries of the same, which capillaries are larger than those in other parts. By being so congested the increased supply of blood gives increased heat, and furthermore, through the swelling, the lumen of the passages is reduced in size, causing the air to pass through under great pressure and in a thinner column, so that it may be more thoroughly exposed to the heated turbinals. Simultaneously with the swelling of the turbinals, the nasal secretion becomes greater in quantity, so as to better humidify the air and at-

tract the dust or cause its precipitation. Furthermore, evaporation of this secretion is more rapid owing to the increased rapidity of the air current.

The ophthalmologist ever has in his mind the emmetropic eye, though such eyes are rarely to be met with. The refracting of abnormal eyes, and the surgical or gymnastic correction by prisms of muscle inequality or strain, are merely efforts to cause the defective eye to more nearly resemble the emmetropic standard. In the same way the duty of the rhinologist is, on the same principle, to cause the defective nose, as nearly as possible, to become patterned after the ideal standard, and in this way we have the key to the cure of nasal catarrh.

Chronic nasal catarrh is chiefly a structural disease, and its cure generally consists in the removal of hypertrophied or pathological tissue.

Meyer was one of the first to make a decided advance, and one of great import, when he published the result of his studies of adenoid hypertrophy, showing its causative effect in the production of both post-nasal catarrh and trouble of the ears.

In a small per cent. of cases nasal catarrh is due to a catarrhal or empyemic condition of some one or other of the accessory cavities, though, in my experience, such conditions are invariably associated with other nasal defects, wherein either some degree of hypertrophy impairs the ventilation and drainage of the fossa, or else a condition of atrophy is present, and, therefore, in either event, presenting a structural change.

Atrophic degeneration, if not a sequella of the hypertrophic condition, is frequently found associated therewith—so often, in fact, that it would seem to be ample proof that atrophy is frequently a late stage of that which began as a hypertrophy. A frequent cause of atrophy is the presence of septum growths, against which unyielding points the opposing turbinal is caused to press each time it becomes distended until, after years of such restraint, its normal contractile elacticity is impaired and, through the irritation long kept up, hypertrophy follows, which in time is succeeded by pressure-atrophy. Thus we see the result of Nature's awkward effort to remedy the hypertrophy and stenosis. While Nature is ever trying to correct defects, her aim should be anticipated and her footsteps guided, else she may go astray. As the condition of atrophy advances the nostril gradually increases in caliber until it becomes abnormally large, and hence there is lost, to a corresponding degree, the physiological property of moistening and warming the inspired

air. Such secretions as are present, being too dense to evaporate, become incrusted and decomposed, and frequently are instrumental in causing the breath to be offensive. In the treatment of atrophic rhinitis, while a return to structural form is seldom attained, the condition is greatly benefitted by following out the line of practice recommended in this paper, viz.: the correction of all hypertrophic conditions existing so that all parts of the nasal fossæ—meaning in this case particularly the attic—shall be thoroughly ventilated and drained.

Perforation of the nasal septum, even though the turbinals remain normal, produces the equivalent of atrophic rhinitis to the extent of the size of the perforation, and is an unfortunate structural deformity which, in the present state of the art, is incurable.

It is not within the scope of this paper to attempt the consideration of the remote or primary causes of deformities of the bony or cartilaginous tissues of the nose. Some of the causes of hypertrophy of the soft tissues have already been touched upon, and among others may be mentioned recurrent attacks of coryza, induced by climatic changes generally, and particularly by those frequent and sudden changes from heat to cold, and from dryness to humidity, so continuously made by going in and out of our modern, overheated, and too often poorly ventilated, residences and public buildings. Additionally dietetic irregularities, the wearing of cotton instead of woolen underwear, and many other customs of latter-day civilization may be cited as predisposing causes.

In this paper only the present condition of chronic nasal catarrh is being considered, coupled with nothing more specific than the general principles of treatment.

The correcting of nasal deformities is much like the remodelling of an old house. With a sufficient amount of patience and perseverance on the part of the patient, and of careful and systematic work on the part of the surgeon, results satisfactory to both will in a very large per cent of cases be obtained. It is far better that nasal defects be corrected early in life, and as soon as recognized, for, in this way, the kindly help of Nature will be secured, and at a time before she, through misguided efforts to improve, has unfortunately done damage which will be difficult to remedy.

When the laity, as well as the rank and file of the profession, fully recognize the great import of nasal deformity, it will be quite as customary to have the rhinologist examine and correct the defects of the nose as it is now to make annual visits upon the dentist in order that the teeth may be kept in perfect repair.

Conclusions:

1. That chronic nasal catarrh is chiefly a structural disease.

2. That impairment of ventilation and drainage of the nasal fossæ are the most important causative elements.

3. That the touching of opposing surfaces is one of the most important pathological factors.

4. That the line of treatment is largely surgical, and the chief object aimed at is to cause the defective nose to conform, as nearly as possible, to the shape of the ideal standard.

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The Hygiene of the Child's Voice.

F. C. Ewing, in the *Medical Review*, presents a most timely paper. The author does not discuss defects of articulation, but confines himself to those conditions influencing *timbre*, and is, as it claims to be, "a plea for excellence in *tone*." These conditions are classified as Pathologic Affections of the Vocal Passages, Conditions Influencing General Health, Faulty Use of Voice.

The pathologic affections pointed out are those producing nasal obstruction to enlarged tonsils, palatal fissure, deviated septum, catarrhs, adenoids, etc., all of which should be treated early before the nasal twang becomes fixed as a habit.

Under conditions influencing general health the writer dwells upon the importance of an outdoor life, free exercise in the open, and certain breathing gymnastics for those whose circumstances of life curtail outdoor exercise. Attention is called to the fact that the inhabitants of southerly countries, who live much in the open air, have softer and more musical voices than those of northerly tribes; persons country-bred, as a rule, have louder and finer voices than those city-reared.

The faulty use of voice, involving generally *pitch*, oftener requires training by the elocution master, though intelligent and persistent parental attention may do much to modify the unnatural tone by lowering pitch. Faulty use of voice is very capable of correction, and the paper advocates a "talking master" for our public schools—some one to direct the control of voice of both teachers and pupils, since a large majority of the former are hoarse, proof that they are ignorant of the laws of vocal control.

BULBOUS OR CLUBBED FINGERS.

FRANK M. RUMBOLD, M.D., ST. LOUIS.

In looking up the literature one is impressed with the paucity of observation made and the little that has been said on this subject by our writers. Even in that truly wonderful work, the Index Catalogue of the Surgeon-General's Library, but little is found in the way of bibliography.

FIGURE 1.—Bulbous or Clubbed Fingers.

Bulbous or clubbed fingers and nails are met with in about twenty-seven per cent. of cases of pulmonary phthisis, and while the so-called authorities do not consider this condition pathognomomic, it is considered worthy of attention. Some authors mention it as occurring occasionally in functional heart trouble and pleuro-pneumonia. The writer believes it is always indicative of some form of "lung disease," and that its presence should always cause the physician to

make a careful physical examination of the chest. In none of the published records of cases available is there any attempt made to explain the phenomena. That it must be due to some circulatory disturbance would seem to be self-evident, and it would also seem that the nervous apparatus was also involved, but to what extent is not as yet clear.

The following case is reported because of its striking appearance:

E. N—., female, æt. seven, was brought to my office September 30th, of the present year, on account of a persistent cough. In handing the patient a tongue depressor my attention was at once at-

FIGURE 2.—Bulbous or Clubbed Fingers.

tracted to her fingers, and upon questioning the mother elicited the following history: On February 3, 1897, the child was taken sick with what the attending physician pronounced pleuro-pneumonia; was confined to bed for seven weeks with fever. For four weeks additional she remained in bed, as she felt disinclined to exert herself in any way. From this time on convalescence was slow, and she was troubled with a constant, irritating cough. Her previous health had been excellent. During the latter part of her confinement to bed her mother noticed that her finger nails, which had previously

been of the "filbert" variety, were becoming clubbed, also that the distal phalanx was becoming enlarged. The child complained of pain when the ends of the fingers were touched, and was greatly troubled with "hang nails." Laryngoscopic examination showed the mucosa of the upper respiratory tract inflamed, and considerable hypertrophy and hyperplasia present in the nasal cavities.

Physical examination revealed a slight hypertrophy of the heart and the presence of friction and moist rales. Microscopic examination of sputum failed to show any tubercle bacilli; weight, 44 lbs.

The accompanying illustrations hardly give an idea of the great deformity. The clubbing of the nails is plainly shown in both figures. The bulbous extremity of the fingers is best illustrated in the third and fourth fingers of the left hand, in figure 2. It will be noted that the fingers taper till the distal joint is reached, and then the enlargement begins almost abruptly. The great toes are similarly affected.

Nasal Mucous Membrane as a Remedy.

Dr. Rivière, of Lyons (*Lyon Médical*, September 19th), reports that he has employed in the treatment of a certain number of nasal affections a fluid extract of the pituitary mucous membrane prepared by Dr. Jacquet in the following manner: The mucous membrane of the middle and lower turbinated bones of the sheep is macerated for twenty-four hours, at a temperature kept at 149° F., in water containing four parts of resorcin in a thousand; the liquid is then filtered and subjected to the same degree of heat for twenty-four hours more. The results of the use of this preparation, says Rivière, are analogous to those produced with other substances that are efficient in cases of perforation of the septum, rhinitis sicca and rebellious syphilitic disease of the nose. In a grave case of ozæna that had relapsed after various sorts of treatment, including the employment of electrolysis, applications of the pituitary extract, after cleansing, were followed by a rapid subsidence of the odor and then by greater benefit in every way than is generally obtained by the use of procedures less innocent or more difficult.—*New York Medical Journal*, October 30, 1897.

HAY FEVER AND CORYZA — THEIR RELATIONS AND TREATMENT.

BY SETH SCOTT BISHOP, B.S., M.D.

Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital, etc.

It has been demonstrated repeatedly that sufferers from hay fever are subjects of uricacidæmia. By urinalysis, I have found the proportion of uric acid to urea excreted as high as 1 to 23 in some cases, while the normal relation is about 1 to 33. In other instances the excessive proportion of uric acid is less, but marked. Treatment of such cases with those remedies that eliminate the acid from the blood relieves and prevents the suffering. So we have the proofs of both chemistry and experimental therapeutics that an excessive proportion of uric acid in the blood bears a causative relation to hay fever.

It is by no means contended that uricacidæmia is the sole cause of this disease, but it is an exceedingly important factor that must not be overlooked if the disease is to be conquered. In 1893, the author proposed the uric acid theory of hay fever, in a paper on the subject, at the meeting of the American Medical Association. Since then, further studies and experiments have not only confirmed the propositions laid down at that time, but have appeared to substantiate a causative relation between uricacidæmia and coryza, a condition correlative to hay fever.

Hay fever and coryza are not identical diseases. Hay fever is not an inflammatory disease, while coryza, or acute rhinitis, is. They are closely related to each other. Indeed, there are many maladies closely allied to paroxysms of hay fever, or nervous catarrh. For example: asthma, intense itching, oversensitiveness of the skin, neuralgia, sick headache, irritability of temper, etc. The first three conditions often characterize attacks of hay fever. Migraine sometimes alternates with these attacks, and at other times supplants them. Uricacidæmia is provocative of all these conditions.

Now it may be asked: "What does uric acid do?" In answer, I will quote from Haig: "Uric acid in the blood contracts the arterioles and capillaries all over the body, producing the cold surface and extremities, raising tension of pulse, and, according to Marcy's law, that pulse rate varies inversely as the arterial tension, slowing the

heart. Headache is a local vascular effect of the uric acid. Excretion of this acid may even explain the mental depression and irritability and their results in the excess of suicides and murders in July. There is an excessive secretion of this acid in the warm months, and a minus excretion in cold weather. During plus excretion there will be high arterial tension, with anæmia of the brain, bad temper, etc. At this time a dose of acid would free the brain circulation from the power of the uric acid, and produce, as Roy and Sherrington have shown, an increase in the size and a free flow of blood in its vessels."

In health, about five to eight grains of uric acid are secreted every twenty-four hours, and it is readily soluble in the blood, which is slightly alkaline. If there is increased formation of this acid, no harm results so long as it is properly eliminated and the ratio between it and the urea is not disturbed.

The uric acid theory of hay fever is not antagonistic to the present status of medical opinion or surgical treatment, but, on the contrary, explains questions that were inexplicable before. As a tumor or hypertrophied bone may give rise to convulsive seizures in epilepsy, and as its removal may be followed by relief when no other structural cause exists, so in hay fever, where new growths and other lesions of the nasal mucous membrane are present, the attack may be started by the accumulation and the suddenly setting free of uric acid. This precipitates the paroxysm by its irritant action, which finds expression in the group of symptoms characteristic of hay fever or asthma, instead of some one of the other allied diseases. The particular form of manifestation may be determined by the growth, or seat of irritation, located in the nasal cavities. Where this is the only determining factor of the nature of the morbid symtoms, no other organic disease having resulted from the long-standing trouble, the removal of such a peripheral source of irritation may give relief from these symptoms, but it may not prevent the uricacidæmia from switching off into other kindred lines of disturbances if it be not corrected.

The uric acid theory makes clear the reasons why some persons suffer from attacks of hay fever under certain favorable conditions in winter, as well as during the warm months. It also unifies all the various forms of the disease. They are all variations of a nervous catarrh.

Impressed with the striking similarity of hay fever and coryza, I resolved to experiment with remedies that were successful in hay fever, to learn if they were effective in coryza also. I had demonstrated a great many times that a combination of morphia, atropia

and caffein in the proportion, respectively, of $^1/_{12}$ grain, $^1/_{600}$ gr. and $^1/_6$ gr. would avert or abort attacks of hay fever and of coryza in their initial stages. I had experienced the same results with effervescent citrate of lithia in hay fever, so I improved every opportunity to test the efficacy of lithia in coryza, and found that if it were taken in doses of about 10 grains in a tumblerful of water, when the first symptoms of acute rhinitis appeared, the full development of the disease was prevented. Indeed, on the following day, when the patient ordinarily would have suffered much distress, he was free from any symptoms. In some cases the dose of lithia was repeated, even several times, but the threatened rhinitis was cut short and failed to develop while the blood was flooded with the lithia solution. In the cases where urinalysis was made uric acid in excess was found.

Now the question arises: What has uric acid to do with causing a cold in the head? Bearing in mind what has already been said, the relevancy of the following observations will become apparent: Uric acid is readily solvent in the alkaline blood, and is largely eliminated by the secretion of the skin. Chilling the skin produces cold in the head, or coryza. This chilling arrests the secretion of the skin and checks the elimination of uric acid from this surface, besides diminishing the circulation of the blood in the capillaries of the skin, and by thus disturbing the normal balance of circulation it throws an excess of blood into the already weakened blood vessels of a predisposed organ—in this case, the nose. Moreover, in fever the blood becomes of an acid reaction, but cold renders it alkaline, in which state it readily takes up the excess of uric acid stored in the more alkaline tissues and becomes rich in this irritant of the vessels.

Hence the relation of hay fever to coryza becomes apparent. The initial stage of the latter is correlative to the former, and the remedies for one are successfully applicable to the other. Reduce the alkalinity of the blood, excite free secretion of the skin to eliminate the excess of uric acid, restore the balance of circulation, and nature will do the rest. Remedies that quickly rid the blood of the excess of uric acid, like lithia, produce prompt results. The physiological action of the coryza tablets referred to is too apparently applicable to require further elucidation.

It hardly seems necessary to add that a vegetable diet, abstinence from meats, sweets, wines and beer, appropriate exercise, and the removal of any peripheral causes of irritation, are necessary factors in the treatment.

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ANATOMICAL OBSERVATIONS WHICH EXPLAIN WHY MASTOIDITIS DOES NOT OCCUR WITH MORE FREQUENCY IN CASES OF SUPPURATIVE OTITIS MEDIA.

An Oral Communication to the First Spanish Oto-Rhino-Laryngological Congress,

BY DR. FORUS, OF MADRID.

Translated and Abridged

BY VINCENT GOMEZ, M.D., OF NEW YORK,

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I have often asked myself the question: Why is it that cases of suppurative otitis media being so frequent, mastoiditis is not produced in proportion to this frequency? Could this be explained by the fact that the patient being in the erect posture the greater part of the time, the perforation takes place in a more or less low position in the tympanic membrane, and the purulent discharge makes its exit with greater facility? I have been convinced that this is not the reason, because as the patient is in *decubitus supinus* the *aditus ad antrum* is at a lower level than the tympanic cavity, and the pus, by its own weight, would fill the mastoid cavity before one drop could come out of the tympanic perforation.

Now, as this only occurs in exceptional cases, I have endeavored to investigate its cause, and after having made careful dissections of fresh temporal bones, I have come to the conclusion that the process is due to the anatomical disposition of this region, which is quite different from the description given of it by recognized authorities.

The tympanic cavity is not an exclusive cavity. This cavity which, during embryonic fetal life, is filled with a gelatinous conjunctival tissue, is emptied soon after birth; but the process of reabsorption gives rise to various fibro-mucous fold, which are like membranes, of more or less marked consistence, which have been partially described by some with the name of ligaments, and which, on the whole, are nothing more or less than a species of epithelium, which covers and protects all and each of the structures within the tympanum. This process gives origin to a system of cavities which divide the tympanic cavity into various compartments.

Of these there are two of great anatomo-pathological importance—one, antero-inferior, which I propose should be called *tubal compartment* of the tympanum; and another, postero-superior, which may be called *atico-mastoid* compartment.

The septum which separates these compartments, and which encloses in its thickness the chain of ossicles, originates above the Eustachian tube, and extends along its anterior part in the form of a tent from the external to the internal wall of the tympanic cavity. At the external surface it surrounds the anterior muscle of the malleus, the existence of which I have been enabled to prove on the cadaver, although none of the modern anatomists make mention of said muscle.

Now, from this point, which is the anterior-external limit, it runs towards the internal wall, protecting the chorda tympani from where it leaves the anterior pocket of Von Troelstsch, forming a very acute angle with the tendon of the referred anterior muscle of the malleus. The membranous expansion before reaching the malleus receives the reflex tendon of the internal muscle of the same, and from this point it gives off various expansions. Some, the internal, go to form all those ligaments which unite the hammer and its neck to the immediate regions, and which have been described by some anatomists. Another continues up to the long process of the incus along the postero-internal portion, constituting a sort of diaphragm, which has been described by Urbantschitsch, and which reaches the posterior part of the promintory, above the round window, continuing along the stapes, the latter being surrounded by it up to its base, and extends up to the posterior wall to protect the tendon of the stapedius muscle. Other posterior expansions give rise to the posterior ligaments of the incus, and other superior ones to the suspensory ligaments of the ossicular chain.

In this way the tympanic cavity is completely divided into two great compartments, and other smaller ones. An antero-inferior compartment, comprising anteriorly the Eustachian tube, through which it is continuous with the rhino-pharyngeal cavity, and comprising that portion of the tympanic cavity which is in relation with the tympanum proper, and is limited posteriorly by the inferior portion of the posterior wall of the tympanic cavity and by the septum already mentioned; it, then, has in its posterior cavity the opening for the round window, and as a proximal limit we have the oval window enclosed in the thickness of the referred septum. All these constitute the antero-inferior chamber.

Above the septum already described there is another compartment, made up of the attic, antrum and mastoid cells.

I said before that there were other smaller septi, expansions of the one just described, which, in this connection, constitute cells of minor importance. They are: Von Troelstsch's and Prussack's pockets, the cavities of Politzer and others of less constancy.

After due deliberation, I believe that this is a normal division of the tympanic cavity, and serves to explain various facts, namely, that the otitis which we call catarrhal are not panotitic, but otitis of the tubal chamber; that is, that as we consider some otitis as being limited to Prussack's pocket or pouch, we should likewise bear in mind that all the catarrhal otitis, by tubal infection, remain in their propagation, limited to the antero-inferior or tubal chamber, and that they require some time before destruction of the septum which I have described permits the process to invade the mastoid region.

Experiments on the fresh cadaver have proven the truth of my statements. I attached the canula of an irrigator to the Eustachian tube, after removing the superior wall of the mastoid antrum, and injected water, which did not flow out when the level of the fluid was in favor of the irrigator. Allowing the deposit to ascend to four or six centimetres, the water did not flow out, although its level made one suppose that the fluid most likely had passed into the mastoid region. Then, to assure myself that there was no tubal obstruction, I made a paracentesis, when the fluid was seen to make its exit with abundance through the tympanic wound. Shortly afterwards, when the external auditory canal was tamponed, the water did not come out through the mastoid region; but on lifting the vessel still higher I observed that when it was 24, 26, and in one instance 30 centimetres above the level of the water over the preparation, the septum which I have described ruptured, and then the water made its exit in an abundant stream through the mastoid antrum, as occurred before through the external auditory canal.

In judging the true merits of this experiment, we must not lose sight of the fact of the loss of resistance which takes place in the organic tissues after death.

I believe that the counterproof which I have cited will suffice to complete the demonstration why it is that mastoiditis is rare in relation with cases of suppurative otitis media.

A CASE OF OTITIC BRAIN ABSCESS (FROM CHRONIC OTORRHŒA); OPTIC NEURITIS; OPENING OF THE MASTOID AND SKULL—RECOVERY.*

BY FRANK S. MILBURY, M.D., BROOKLYN, N. Y.

Laryngologist, Otologist and Ophthalmologist to the Bedford Dispenssay and Hospital, and North Brooklyn Eye, Ear and Throat Hospital, Brooklyn, N. Y.

On May 25, 1897, Mrs. G. brought her sister, Mrs. J., aged thirty-three, to my office, bearing a letter from Dr. James J. Brown, requesting me to look over the case and render my opinion; at the same time stating that he believed a mastoid operation was indicated. As I could get no intelligent satisfaction from the patient, I interrogated the sister, who stated that there had been more or less continuous discharge from left ear since infancy, following scarlet fever. At this time it was extremely offensive. By the touch of a sound, dead bone was easily perceived in tympanum and posterior wall of meatus, which was swollen and bulged forward. Mastoid odematous and very red. The entire side of the head was acutely sensitive to the most gentle pressure. Violent, uncontrollable headaches had continued several weeks. Slight paralysis of the left side of face and right arm and leg existed. Her past life seemed wrapped in complete oblivion, and it was almost impossible for her to put what thoughts she had into words—showing amnesic-aphasia. Temperature, 100°; pulse, 115°. Excessive vomiting on the least movement of head, and nearly as much so when lying down and the head perfectly quiet. The ophthalmoscope showed optic neuritis in the left eye, and, more than that, the condtiion of the patient precluded any further examination of the eyes by the perimeter or otherwise. In all probability there may have been present hemianopsia. It was evident that mastoid necrosis and suppuration existed, with possible cerebral abscess and meningitis, and the sooner an operation was performed the better. Accordingly she was placed in the Bedford Dispensary and Hospital.

The next day, May 26, at 11 o'clock a. m., with the assistance of Drs. Bowen and Rickard, she was anæsthetized, head shaved, and under the most careful antiseptic precautions we incised the soft tissues, detached the lining membrane of the meatus, laying the ear

*Read before the last Session of the New York State Medical Association.

forward, and retracted the posterior integument, giving a clear view of an extended field. The cortex in places was soft, but no fistulæ or pus were visible on the surface of the bone. By cautious chiselling, the antrum was entered. With a probe I explored, and found in every direction carious bone, which was easily removed by a sharp spoon, and nearly the entire mastoid was found to be involved. The antrum and large cell at tip of mastoid and smaller cells were filled with the foulest pus imaginable. The lateral sinus came into view, but looked blue, healthy and pulsating. A large sequestra was removed from the posterior wall of meatus, making a broad connection between the tympanic cavity and antrum. Also the posterior-superior wall, which was soft, was removed, and the moment the brain cavity was entered pus rolled out in large quantities. I enlarged the wound in skull with a rongeur, and with a sound measured the depth and extent of the pus cavity. Greatly to my astonishment the instrument passed in about 4½ inches, and I should think the sinus had a diameter of fully an inch and involved a portion of the tempero-sphenoidal lobe. Dr. Arthur C. Brush, a well-known neurologist of Brooklyn, who was called in consultation, is of the opinion that the abscess was, in this case, formed by a localized purulent meningitis, the walls of which were formed by adhesion between the dura and the arachnoid. In other words, it was an intradural abscess. He does not think it involved the brain tissue proper to any extent on account of the rapid and complete disappearance of the symptoms after the pressure was relieved by the evacuation of the pus, which would preclude any destruction of brain tissue.

The position of the lateral sinus would indicate that it was situated above the tentorium, and the direction taken by the probe that it extended inwards, forwards and downwards; that is, along the superior border of the petrous portion of the temporal bone to or even beyond the median line.

An abscess in this situation on the left side would, by pressure on the speech centers, give rise to aphasia with or without paralysis of the muscles concerned in the movements of the face and speech, on account of their dual representation, and the fact that the more highly organized centers are the ones which are the first and most seriously affected. The right hemiplegia is easily explained by pressure on the adjacent capsule. The left facial paralysis is due to the local involvement of the facial nerve in its passage through the petrous portion of the temporal; thus this pressure would produce the amnesic-aphasia.

Two hours had elapsed in the tedious work and was well borne by

the patient, but when we began there was little idea of her surviving the operation. The wound was flushed with a 1 to 6,000 corrosive sublimate, dusted with iodoform and dressed with sublimate gauze, a drainage tube being put in place, and the whole covered with cotton and a rollen bandage. She was put in bed at 1:30 p. m.; temperature, 101°; pulse, 125°; extremities cold; hot water bottles to feet, and every two hours she was given an injection of strychnia and whiskey. The after-treatment was long and tiresome: Temperature at 6 p. m., 100°; pulse, 120°, and 8 p. m., 110°. Extremities warm; reaction from ether good; vomited considerable; slept from 12:30 a. m. to 5 a. m. Frequent vomiting continued for six days, or until June 2, and for twelve days thereafter the temperature varied from 99½° to 101°; pulse from 80° to 120°, sometimes weak and intermittent, and at other times full and strong. Could retain no food in her stomach, but was nourished by enemas. At first dressing, quite a quantity of pus came from wound, but there was no odor. During the first seven days she remained in a state of almost constant lethargy, uttering no sound and apparently recognizing nothing. On the eighth day, when Dr. Bowen called her by name, asking her if she knew him, the response was by quite a firm pressure of the hand. On the ninth day, June 4, and for several days thereafter, when asked a question, the answer would be "No" or "Yes, dear," placing her hand upon her head, at the same time giving utterance to the word "pain," but not conscious of what she was doing. On June 7, when asked how old she was, she would shake her head, indicating she did not know, but when told said "that's right."

The wound healed kindly, and recovery of her general symptoms continued gradually, but slowly, to improve to a complete restitution of the mind and paralysis of face, arm and leg. The hearing in the left ear, as will be surmised, is nil; vision normal; but at rare intervals she will say funny things, as if she did not realize what she was uttering.

I have been unable to discover a parallel case in literature, and doubt if there is one. It was seen by a large number of well-known physicians, but none could understand the existing condition, and the greatest mystery of all is the recovery. Another peculiar feature is the fact of her being about four months pregnant, and through it all did not abort. The mental condition was probably due to the abscess and pressure on the brain, which occasionally occurs in such cases.

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FOREIGN BODIES IN THE EXTERNAL AUDITORY CANAL, WITH REPORT OF A CASE.

BY F. G. HACKLEMAN, M.D., RUSHVILLE, IND.

Robert W., aged twelve, was brought to my office with the following history: At the age of three years the parents began to notice that his hearing was not as acute as it had been; there was a scant discharge from the ears which lasted quite awhile; the failure in hearing was gradual. On the advice of kind neighbors and the family physician, who told them he would outgrow it, and nothing could be done, he was allowed to run on till he was twelve years of age, and by this time he was so deaf, that in going and returning from school, he was in danger of being run down by wagons on the road. As a precautionary step in preventing bodily injury to the boy, his parents decided to have his ears examined for the probable cause of the deafness. I examined the external auditory canals by reflected light and could make out some obstruction, completely occluding the external auditory canal of each ear. What it was I could not tell. I proceeded to clear the canals, but found it very difficult, as the obstructions were hard and unyielding, but by alternating with syringing with hot water, forceps and scoop, I succeeded, after four sittings, in removing three beans, of the small soup variety, from each ear, which, together with the cerumen, had moulded into a mass, completely occluding the external auditory canals. The boy had no remembrance of planting the beans in his ears, but they were certainly pushed into the ears at or before the age of three years and had remained there the ensuing nine years. There was immediate improvement in the hearing, and at the present time, six months later, the hearing is almost normal, hearing ordinary conversation six to eight feet and watch tick forty inches.

At the time of the removal, the boy's expression was dull; he was slightly asthmatic, with a feeble circulation. His general appearance has improved; he has gained in weight, and is making rapid improvement in his studies at school.

THE PROGRESS OF OTOLOGY.*

BY LAURENCE TURNBULL, M.D., PHILADELPHIA.

It is with great pleasure I accept the honor of responding to the toast "American Otology." The *eye*-men are by right *egotistical*, so that, if I claim the privilege of asking you to "give *ear*" to what I have to say, you must pardon me when, with mingled emotions of pride and satisfaction, I refer to American Otologists.

When nearly fifty years ago I dared to pose as a specialist, I was almost tabooed, and only ventured to assert myself by reporting successes in treatment, wherein I was sustained by a few liberal professional brothers and by grateful patients. I have now the compensation to which Prince Bismarck gave such feeling testimony not many years ago, when he said: "One of the advantages of becoming old is that one becomes indifferent to hatred, insult and calumny, while one's capacity for good-will and love is increased."

Gentlemen, in adopting otology as a specialty and as my life work, the obstacles in my path were many, but in looking about me to-day I see so many enthusiasts, skilled otologists or experts in the allied branches, laryngology and rhinology, that I am proud to believe my efforts have not been altogether in vain.

In the year 1845 I was elected to the Department of Diseases of the Eye and Ear in the "Western Clinical Infirmary," now the Howard Hospital, an institution devoted to specialties. This was not the first institution which made diseases of the eye and ear a specialty, for it is stated by Dr. Roosa that the New York Eye and Ear Infirmary was in existence as early as 1828. Some years later followed the Manhattan Eye and Ear Hospital; but little attention was given to otology, however, until the advent of the New York Ophthalmic and Aural Institute and Dr. H. Knapp.

In 1868, I was elected, by the Board of Trustees of the Jefferson Medical College, Aural Surgeon to the then newly organized Jefferson Medical College Hospital. Dr. Wm. Thompson was ophthalmologist, but otology had held a very insignificant place when turned over to me. Now, after nearly thirty years, the daily clinics number from thirty to forty patients, under my late chief, now colleague, Dr. S. MacCuen Smith, of this city.

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*An address delivered in response to a toast at the banquet of the Laryngological and Otological Section of the American Medical Association, at the Semi-Centennial Meeting in Philadelphia.

The "American Otological Society" was established about the same time as the Jefferson Hospital (1868), and has published from seventeen to eighteen volumes of its transactions, showing the good and creditable work done by American otologists. In 1869, Drs. Herman Knapp, of New York, and S. Moos, of Heidelberg, commenced the publication of the *Archives of Otology*, issued simultaneously in English and German. These have continued up to the present time, and in them are published many valuable papers on otology. There are two or three journals that devote special attention and have departments devoted to diseases of the ear: THE LARYNGOSCOPE, of St. Louis, *The Journal of Eye, Ear and Throat Diseases*, edited by the members of the surgical staff of the Presbyterian Hospital, Baltimore, Md., and *Annals of Otology, St. Louis.*

As a clinical teacher, my effort was to collect and put forth surgical facts in relation to the diseases of the ear, publishing them in the several medical journals. Subsequently, *I wrote the first text book, in this country, on the ear, entitled "A Clinical Manual on Diseases of the Ear,"* which was published in 1872. This soon passed into a second edition and I am now working on a third, but I was gratified, although I confess it did make me feel a "bit older," when your Chairman, Dr. Alex B. Randall, wrote me, "you are one of the few men living who can take us back to the days before Politzer (1878-87), Wilde (Dublin 1853), Toynbee (1860). In 1873, Dr. A. D. Williams, of St. Louis, published a work on the diseases of the ear.

In the earlier times, those devoting their attention to otology were few. During 1876, the Centennial year, I wrote up the "Section on Otology" as a portion of a work, "On the Progress of Surgery in the United States," by the late Professor S. D. Gross.

Among the earlier, more important, workers in Otology, were Drs. Edward H. Clark and J. Orne Greene, of Boston, and Dr. D. B. St. John Roosa, of New York City, the latter having translated the very useful publication of Von Troeltsch. I dwelt at that time upon the good work performed by these gentlemen, and especially of the writings of Professor Edward H. Clark, of Harvard University, on "Perforation of the Membrana-Tympani: Its Causes and Treatment," which was then considered the best contribution to the study and treatment of that portion of the diseases of the ear. Dr. Clark subsequently published a very valuable illustrated monograph upon "Polypus of the Ear."

In 1873, Dr. D. B. St. John Roosa published his elaborate and careful work, "A Practical Treatise on Diseases of the Ear," which

has, we are pleased to note, passed to a seventh edition. The first volume was full of valuable personal experience, as giving the therapeutic and surgical treatment of all the more important diseases of the ear. Dr. J. Orne Greene was one of the first in this country to publish an account of "Aspergillus," and he then believed that the thorough use of hot water was all that was necessary for its cure. He also described the operation of detaching the auricle for the removal of foreign bodies in the auditory meatus, also "the effect of explosions of gas near the ear, causing rupture of the membrana-tympani." This same authority made careful dissections of the ears of those who had been born deaf, and published them for the benefit of his fellow-practitioners. He also operated by, and recommended, Gruber's method of operation for the tenotomy of the tensor-tympani, but advised making an incision posterior to the handle of the malleus with a broader tenotome. Dr. Greene's crowning work was to show (1879), by a report of three cases of mastoid periostitis, that phlebitis of the emissory veins of the mastoid may, and does occur, in the course of inflammation of middle ear and lateral sinus much oftener than had been observed before. Dr. Greene also published a post-mortem account of the diseased ear, and found that caries may occur with an intact drum-head, which fact has been confirmed in many instances.

Dr. Prout, in 1872, divided the adhesions between the membrana-tympani and the promontory with a very small iridectomy knife having a long handle.

In 1873, Dr. Chas. H. Burnett, of Philadelphia, published a text book upon the "Ear and Its Diseases," the chapters devoted to the anatomy and physiology being especially well written. Dr. Albert H. Buck, of New York, followed suit by publishing a similar work (1880) on "The Diagnosis and Treatment of Diseases of the Ear," as they had appeared in private and hospital practice. He (Buck) proposed "test sentences" for the hearing, but these were found impracticable. He reported the removal of horny growths from the auricle, which had been described first in this country by Dr. Roosa. He especially described desquamative inflammation of the external auditory canal, and he invented a curette very much like that devised by Politzer. The articulation between the stapes and the margin of the fenestraovalis, described originally by Eysell, was confirmed by Dr. Buck. He reported cases of deafness from parotitis, but added very little to the statements made by Wilde, Toynbee, Hinton and Roosa. In 1873, Dr. Buck reported six cases he had operated by opening the mastoid cells. In the year 1879, the *American Journal*

of Otology was founded by Clarence Blake, of Boston. It lived a short, but useful, life, being discontinued in 1882. Blake's contributions to otology were by no means small, and we recall his modified polypus forceps and tuning-forks.

In 1883, Dr. O. D. Pomeroy published his work upon "The Diagnosis and Treatment of the Ear," a small volume of 392 pages. This is a practical work giving the author's large experience in hospital practice. In 1888, Samuel Sexton, M.D., issued his work on "The Ear and Its Diseases," being an original contribution to the study of otology. This was not intended for a text book, but was made up of several articles on catarrh of the upper air tract, oral irritations from sea bathing, wounds and injuries occurring in warfare and civil life, but the portion of especial interest to the otologist, at the time it was published, was that which referred to the operation of "excision of the drum-head and ossicles for otorrhœa," and for deafness, due to chronic catarrh of the middle ear. It included a full account of the literature of the subject, illustrated by numerous operations and their results. Sexton's work is a most useful production, and was, and is, highly appreciated, and is a credit to American otology. The distinguished author had the opportunity of discussing his original views and work at Vienna at the International Medical Congress.

In the year 1887, Dr. Alexander B. Randall, of Philadelphia, published in conjunction with Dr. Harry Lee Morse, of Boston, a series of original and copied photographs of anatomical and pathological preparations of the ear, with valuable notes.

Dr. E. B. Gleason, of this city, published, in 1894, a "Hand-book of Otology," for the use of students, a useful little book which has passed through a second edition. It may be of great interest to note that in one of the most recent works on otology (1893), namely, that of Dr. Joseph Gruber, Professor of Otology of the University of Vienna, translated and most ably edited by Drs. Edward Law and Coleman Jewell, of London, that the following American otologists are frequently quoted: Agnew, Allport, Roosa, New York; Gorham, Bacon, Boston; Bishop, Chicago; Burnett, Philadelphia; Chisholm, Baltimore; Dench, New York; J. Orne Greene, Boston; Hotz, Chicago; Ingals, Chicago; Knapp, New York; Matthewson, Brooklyn; Randall, Philadelphia; Sexton, New York; L. Turnbull, C. S. Turnbull, Philadelphia; J. C. Weir, R. F. Weir, New York; Williams, Cincinnati; and others. This shows the high appreciation in which our otologists are held abroad, and Gruber also gives me the credit for having, in 1862, been the first otologist in the United States to have opened the mastoid.

The various polyclinics which have been instituted within the last few years throughout the United States, have contributed very greatly to the successful teaching of otology. One of the earliest of these was started in conjunction with the Jefferson Medical College, but ceased after a short period, as it was found they were more successful where, like the Philadelphia polyclinic, they were entirely separated from the schools conferring degrees.

In 1893, under the editorship of Dr. Chas. H. Burnett, "A System of the Diseases of the Ear, Nose and Throat" was published in two large octavo volumes of 780 pages. The first volume was devoted to the ear, nose and naso-pharynx, and the second volume to a consideration of the diseases of the pharynx and larynx. Another work highly creditable to American otology is that of Dr. Dench, of New York. His excellent work on "Diseases of the Ear" (1894), is a text book for practitioners and students, containing 615 pages octavo, with colored plates. I desire to refer to this volume and congratulate the author and otology for the existence of so valuable a book. It is not intended as a cyclopædic work on the ear, but is one of the best that has been produced in this country. The drawings and colored illustrations compare favorably with any similar work issued abroad or at home. His chapters on physical and functional examination, particularly the latter, are especially good. The descriptions are terse and clear, and enter into the minutest details, particularly when operative procedures are concerned.

Dr. Seth Bishop, of Chicago (1897), has published a work on the "Ear, Nose and Throat" that is well worthy of careful reading.

In concluding these brief remarks, wherein I have referred to American otologists, we can but note the steady growth of interest in this specialty, and the ever increasing number of scientific men who are devoting their attention to it promises even greater things for the future. And how important this brand of medicine is! Each one of us knows, and only too well, the trials of the infirmities it seeks to relieve, and the many cases of recovery which we meet should stimulate us still more to keep this department of medicine and surgery in the front ranks in the great battle we are waging against the ills of the flesh.

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EDITORIAL DEPARTMENT.

ORIGINAL ARTICLES for publication should be in the Editorial Office on the 5th of the month preceding date of publication.

ILLUSTRATIONS necessary to elucidate the text will be furnished, without expense to authors, when suitable ink drawings or photographs are furnished.

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EDITORIAL.

OUR FOREIGN EDITION.

It is with pardonable pride that THE EDITORS announce that, beginning with the January, 1898, issue, an *European edition* of THE LARYNGOSCOPE will be published.

We believe this occurrence will mark a distinct era in American medical journalism, and it is, we think, a merited recognition of the

great advance made by our profession in rhinology, laryngology and otology.

For many years it has been the custom of the American medical public to look to Europe as the center of theoretical and practical learning in this trio of specialties. The recent spontaneous offer of one of Great Britain's representative publishers, to assume the responsibilities of a foreign edition, may be considered a mark of approval from our transatlantic co-workers, and an index of appreciation of the literary merits of American medical writers.

In closing our third volume, we feel that we have fulfilled our promise to give the profession a useful, active and representative periodical; one that would reflect the best thoughts of the profession, non-partisan and non-sectional.

With the inauguration of this new edition, we feel that our scope and influence will be very materially increased, and it is our ambition to see THE LARYNGOSCOPE reach every medical center in the world in which there is an evidence of activity in the trio of specialties—rhinology, laryngology and otology.

Our new associations will tend to a better acquaintance with our foreign contemporaries, and we expect to publish, in each issue, an article from an English or Continental writer.

We ask the further support and endorsement of our contributors and readers, and pledge them our continued efforts to present the best and brightest thoughts gleaned in the field of our specialties.

The well-known English publishers, Messrs. John Wright & Co., of Bristol, England, will issue the European edition, and their imprint will be a sufficient guarantee that THE LARYNGOSCOPE will be presented in an acceptable form. Messrs. Wright & Co. have been favorably known to the American medical public as the successful publishers of the *International Medical Annual*, a yearly resumé of the best thoughts contained in the medical periodicals of the world.

PROGRESS OF OTOLOGY.

In the list of pioneer American otologists, enumerated in Dr. Laurence Turnbull's interesting paper on "The Progress of Otology," published in this issue of THE LARYNGOSCOPE, the writer fails to mention the name of Dr. Thomas F. Rumbold, of St. Louis. As a pioneer in special work in the diseases of the ear, nose and throat, and as an original investigator in pathology and therapy, we think that some recognition is due him.

F. M. R.

SELECTIONS.

Accidents Following Operations in the Nose and Throat.

Several interesting cases of this kind have been lately reported; among them are the following: Dr. Max Thorner, of Cincinnati, places on record five cases (*Journ. of the Am. Med. Assoc.*, September 26, 1896).

Case I. *Functional Aphonia, following Cauterization of the Pharynx for Chronic Follicular Pharyngitis.*—The patient, a young lady 18 years old, could not pursue her studies as an elocutionist on account of her voice failing during any prolonged attempt at speaking or reading. Numerous enlarged follicles in the pharyngeal wall were treated with the galvano-caustic burner, when one day, immediately after such treatment, her voice was gone. It was a true case of functional aphonia, as the voice returned after a few days almost as suddenly as it had vanished.

Case II. *Loss of Memory following an Insignificant Operation in the Nose.*—A boy, 16 years old, had large hypertrophies of the turbinated bodies, causing complete nasal obstruction. They were removed with the cold snare. About six hours after one of these operations, in which a piece the size of a pea had been removed from the middle turbinated, the boy had a high temperature, headache, and complete loss of memory about everything that had happened for some time. This latter condition lasted several weeks, when the memory gradually returned, although it remained sluggish for two months. The treatment was afterward continued without any further accident.

Case III. *Intubation in an Adult, followed by a Fatal Edema of the Larynx after Extraction of the Tube.*—A young man, 18 years old, had an old cicatricial stenosis of the larynx, probably of a syphilitic origin. The dyspnea was alarming, and the smallest tube of the intubation, set for adults, was inserted without any difficulty. Fifteen hours after the introduction the tube was extracted. Soon after this, while the patient was on his way home, he was overtaken by the utmost dyspnea, and died soon thereafter. Thorner is of the opinion that, after the pressure exercised for fifteen hours by the tightly-fitting tube upon the infiltrated tissues had been suddenly relieved, a subglottic edema ensued, causing a fatal issue within a short time.

CASE IV. *Severe Spasmodic Cough and Neuralgia after a Nasal Operation.*—A lady, 24 years old, was troubled with excessive fits of sneezing which had lasted for years. There was immense enlargement of the left middle turbinated, which was in close contact with the septum. Touching this hypertrophy with a probe caused severe and prolonged sneezing. After removing it with a cold wire snare the patient had a most severe attack of spasmodic cough, and not long thereafter a very intense neuralgia of the left side of the face developed. The neuralgia lasted for several days, while the cough disappeared after two and one-half weeks.

CASE V. *Temporary Amauresis following Cauterization of the Nose.*—A man, 40 years old, was treated for nasal polypi, which were removed with the cold snare, and afterwards the galvano-caustic burner was used. On the day following such a cauterization the patient could not see with the right eye, the side operated upon. He could discriminate between dark and light, but could not count fingers at five feet. Ophthalmoscopic examination negative. Five day later vision improved, and was gradually, after four or five weeks, entirely restored.

A very similar case is reported by Dr. Francis R. Packard, of Philadelphia. He records the following case of *Amauresis following Intranasal Operation* (*Med. News*, October 9, 1897): A man, 36 years of age, had been treated for nasal polypi with the galvano-cautery and the cold wire snare. On one occasion, one day after a snare operation, the patient had suddenly, while writing, become blind in the left eye, the side operated upon. After a while he found that vision commenced to return and before an ophthalmoscopic examination had been finished, which failed to reveal a cause for the disturbance of vision, vision was almost completely restored. The period of complete left-sided blindness was stated by the patient to have been between twenty and thirty minutes.

Dr. L. Rethi, of Vienna, reports a case of *Death following a Number of Operations for Nasal Polypi*. The patient was a man, 62 years of age. Both nasal cavities were filled with polypi, which were removed, in several sittings, with the cold snare. The operations were followed by free hemorrhage, causing Dr. Rethi to tampon the nose with strips of dermatol gauze. Patient died on the fifth day after the last operation. The cause of death was general pyosepticemia with hemorrhagic nephritis, and purulent meningitis (*Archiv für Laryngologie* Bd. IV., 1896, p. 403).

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Joseph W. Gleitsmann, M.D., Chairman.
T. P. Berens, M.D., Secretary.

October 27, 1897.

PRESENTATION OF CASES.

Case of Rhino-Scleroma, presented by Dr. Wolff Freudenthal.

A man, aet. 49; born in Galitia; married when twenty-two years old; he has six healthy children. Fifteen years ago he had trouble with his limbs, but there were no signs of rhino-scleroma at that time.

Fourteen years ago he had a swelling of the nose, which, in the course of a few years, increased to a large size.

When the speaker saw the case, two years ago, the appearance was such as the photograph shows. The nose was hard to the touch, like ivory, and of an immense size. The nasal passages were both closed.

During the past two years the nose has continued to grow. It is traversed by many blood vessels; not hard to the touch, except on deep pressure. The larynx shows cicatricial tissue. There must be an ulcerative process still going on. Breathing was very difficult, and he has worn a tracheotomy tube for seven years. The scleroma has extended away down into the trachea and he uses a bougie two or three times daily in order to clear his trachea from pus, etc. During the last few days he has had seven hemorrhages, sometimes losing over a pint of blood. He is very much exhausted.

Upon trying to look into the trachea, nothing but a mass of pus and blood was visible.

A Case with Pulmonary and Laryngeal Tuberculosis Practically Restored to Health, with the following history, was presented by Dr. Joseph W. Gleitsmann.

He read the subsequent letter, in which the family physician, Dr. Schalk, gives an account of the condition previous to the curettement of her larynx:

"On your request, I herewith send you a short record of Mrs. S.'s case previous to your taking charge of it.

"In the winter, 1894, Mrs. S. called on me, complaining of cough with expectoration and night sweats. She told me that her mother had died from consumption of the throat after childbirth. On physical examination, I found an infiltration of the apex of the left lung, its upper edge standing somewhat lower than the right one. Respiratory murmer of a sharpened character. There was fine crepitation; otherwise the patient was of robust appearance, well nourished and apparently in the best of health. The examination of her sputum (specimen of Dec. 13, 1894) showed the tubercular bacilli in moderate number. The patient gradually grew worse, lost in weight, and an examination of her sputum showed tubercular bacilli in clean culture. In fact, the bacilli were so numerous that in making the specimen it would not give up its red color, so that I immersed it in the discoloring fluid several times, until the idea entered my mind that it might be the enormous amount of bacilli which prevented the specimen from giving up its color.

"At the same time, Mrs. S., who continued to live in very unfavorable sanitary circumstances, lost one of her children with tubercular meningitis, undoubtedly from infection.

"Soon after this, she developed hoarseness and the laryngoscopical examination showed an ulcer on the left vocal cord. Both arytenoids, the false cords and the epiglottis were swollen and covered with mucous. In March, 1897, the patient gave birth to a healthy child, but during her childbed she was in a most pitiable state. Her larynx and pharynx were in such a condition that she was unable to take any nourishment, except once in a while a glass of milk, and this only after having used a powerful cocaine spray. It was then that, as no treatment afforded any relief more than temporary, I asked you to perform the curetting on Mrs. S.'s larynx. All that I expected at that time was that it would enable the patient to take nourishment again, so that I gladly confess that the result far exceeds our expectations."

The patient was received at the German Hospital May 27, 1897, and prepared for curettement May 29. As applications of cocaine produced little effect, a submucous injection was made into the right arytenoid swelling, which brought on persistent bleeding. Dr. G., therefore, desisted from curettement and injected a 50 per cent. solution of lactic acid into both arytenoid infiltrations. After several days the slough at the left side exfoliated, leaving a healthy surface,

and the right arytenoid became smaller and firmer, permitting a thorough excision of the right arytenoid swelling and of the posterior wall on June 9.

On account of severe dysphagia, the patient was nourished by enemata from May 27 to June 17, after which time there was no more difficulty, but some pain yet in deglutition. Besides local treatment, she received internal and general medication.

June 30, some infiltration was detected at the posterior external wall and removed with Heryng's double curette, after which operation the patient lost all abnormal sensation when swallowing.

She was discharged from the hospital July 15, and spent the summer in Sullivan county, New York. She gained there twenty-five pounds, feels perfectly well in every respect, her voice is strong and only slightly hoarse, and the examination of her chest reveals no dullness and no rales. The interior of the larynx presents normal contours, the vocal cords have slightly reddish color and approximate perfectly at phonation. There is a slight asymmetry of the arytenoid region, which appears to be fuller and thicker than in a normal larynx, and represents cicatrization from the previous operation. The patient expects to remain in the country for some time to come, but the speaker will have opportunity to keep posted as to her condition and will report to the Section if any change should occur.

A Case Where Two Very Large Pieces of Necrosed Bone from the Antrum Were Extracted Through the Right Nasal Opening, reported by Talbot R. Chambers, M.D., of Jersey City, N. J.

Charles Luth, aet. 25, inheritance good. Two brothers and one sister died in infancy. One brother, living, is healthy.

His general condition has been one of little ambition or strength, with no appetite, only eating just enough to sustain life; shunned by everybody and an annoyance to himself and others by reason of the penetrating odors emitted from his nose and mouth.

About three weeks since, pains starting at the right antrum and running around the head through the mastoids and occiput, caused him to seek medical aid. He was referred to me by S. F. E. Lambert, of Greenville.

An abstract of his previous history:

Black measles at two years of age, in which he was in convulsions fifty-four hours, and which left him with external strabismus of the right eye. Between four and five years of age he had an attack of diphtheria and later of scarlet fever. Between the ages of seven and twenty-one, he was a sufferer from articular rheumatism and tertian

ague. He had a fall at six years of age for which several stitches were put in the wound, just external to the right eye. Later he had a second fall, breaking off a portion of the left median incisor tooth, and injuring his nose. When sixteen years old, he had a discharging sore for eighteen months, over the right ankle joint.

Two years and a half ago, he had for six months recurring swellings of the right antrum. An attack would last for two or three days. An abscess at the right lachrymal region ended these. When these swellings would occur, he would, by digital pressure, squeeze out pus from the gums over the teeth of the right upper jaw and especially freely through the cavity left where the left median incisor tooth had been extracted. There was no pain in the face all this time.

During the past two years he had been the cause of considerable worriment to his family. He would sleep soundly at night, but a number of times every night attacks of suffocation and difficult efforts at breathing, at first, alarmed them, they fearing that he would strangle to death; but shortly, as soon as he had managed to clear out the mucous and matter from his throat, he would be relieved for the time being. Recently, his family had become accustomed to these attacks. In the morning it would take him from a quarter to one-half an hour to get his mouth and throat clear, and not a single hour during the day was he free from hawking and spitting; during the day there was constant dropping in the throat.

On October 21, he was first seen by me. An examination showed both nostrils totally occluded by a foul smelling detritus. The throat and roof of mouth and tongue were thickly coated, and he was veritably a walking dead cess-pool with a lively stench.

After cleansing the right nostril as well as possible (though very imperfectly) with a cotton-tipped probe, a piece of necrosed bone was made out in the position about where the middle turbinate bone should have been. This piece was found to be very loosely attached, and after considerable coaxing and teasing, and with the plentiful use of cocaine, it was brought away through the right nostril. Free hemorrhage followed for a few minutes, which was stopped by a liberal use of three per cent. solution of peroxide of hydrogen.

On October 23, a second sequestrum was coaxed out of its bed at the anterior base of the right antrum. The first piece of bone measured $1\,1/2 \times 3/4 \times 1/2$ inches and this second piece was but little smaller.

There now remains hypertrophied middle turbinated bone on the right side and the internal antrum wall is gone. A probe passes into the antrum to a point behind the eye-ball and outwards to the an-

trum's external wall. There is a large fenestrum in the septum midway back. Near the median line a probe may be passed well into the sphenoid body. The left nostril is now free and in fair condition. There is an unobstructed view of the pharynx through both nostrils. An electric light placed in the closed mouth fails to penetrate the suborbital tissues, showing their increased density.

In the mouth, the uvula is seen adherent to the left palate, probably a sequel of his diphtheria.

The right eye has atrophic and pigmented choroiditis and is practically blind, v. fingers, 3 ft. left eye, normal v. $^{15}/_{10}$.

To-day, his condition is one of marvelous improvement. He can detect the odor of tobacco. Previously, he could not recognize ammonia. There is no dropping and no odor. He may breathe with his lips closed. He sleeps continuously at night without interruption. He has appetite and enjoyment in eating. The world seems a different world to him and he expects to go to work again.

It is of interest to note that the first sequestra removed was the palatal bone, as proven by the absence of firm resistance on pressure made against the roof of the mouth at the position where it should be, and also at the inner canthus of the eye, where the skin tends to balloon when the patient compresses air in the throat passages.

The second fragment is the base and inner wall of the antrum and measures a little shorter but is heavier than number one.

On October 29, a third sequestra was removed from the anterior floor of the right nasal fossa. It measures $^{5}/_{8} \times {}^{3}/_{4} \times {}^{1}/_{2}$ inch.

It now looks as though all dead bone had been removed and the patient's future promises to be one of comfort.

Sketches from the Meeting of the British Medical Association at Montreal.

Dr. D. Bryson Delavan gave an interesting account of this meeting. The sessions of the Section on Laryngology and Otology were held in one of the rooms in McGill University, under the chairmanship of Dr. Greville Macdonald, of London, who was admirably assisted in the successful conduct of the meeting by one of the Vice-Presidents of the Section, Dr. Herbert S. Birkett, of Montreal, and the two efficient Secretaries, Dr. H. D. Hamilton, of Montreal, and Dr. William Permewan, of Liverpool.

The number of members from England was small, and included, in addition to the Chairman and Secretaries, Mr. Lennox Browne and Dr. Charles Warden. The representation of invited guests from the United States, among those who read papers or took part in the

discussions, was remarkably strong, including, as it did: Drs. Albert H. Buck, Gorham Bacon, R. P. Lincoln, Chas. H. Knight, James E. Newcomb and John O. Roe, of New York; Drs. Clarence J. Blake, Henry Lee Morse, Samuel W. Langmaid, John H. Farlow, of Boston; Dr. John N. Mackenzie, of Baltimore; Dr. Ernest L. Shurly, of Detroit; Dr. William C. Glasgow, of St. Louis; Dr. E. F. Ingals, of Chicago; Dr. Joseph H. Bryan, of Washington; and Dr. W. H. Daly, of Pittsburgh.

The discussion on turbinectomy, opened by the President, was interesting, as treating of and condemning a surgical abuse fortunately unknown in this country.

The discussion on "The Ultimate Results of Operation on the Mastoid in Suppurative Disease," brought out a rare array of talent, and, although the participants departed somewhat widely from the subject, their contributions were the most useful and interesting which were presented during the meeting of the Section.

No account of the meeting would be complete without some allusion to the social side. The guests were most hospitably entertained by dinners, public and private, by charming excursions and by a large number and variety of social functions.

The whole city was practically placed at the disposal of the company and the hospitality, geniality and generosity of the hosts left nothing to be desired. The occasion will long be remembered as one of the most delightful of its kind.

Reminiscences of the International Medical Congress at Moscow, by Dr. J. W. Gleitsmann. (See page 271, THE LARYNGOSCOPE, Vol. III, No. 5.)

Nasal and Other Polypi, paper by Henry L. Swain, M.D., of New Haven, Conn.

After apologizing for choosing this subject, the author indicated the points of view from which he would consider the subject.

Typical nasal polypi have always been noticed to be more frequently present in the upper region of the nose, in or about the middle turbinate body. It seemed that polypi, in some instances, were developed where there was manifest only that form of endo-rhinitis which we are pleased to give the extremely indefinite title, hypertrophic catarrh. This caused, in the region of the middle turbinate body, hiatus semilunaris or thereabouts, certain effects, of which the outcome was the mucous polyp, coming therefore directly from a thickened mucous membrane. When pus comes from the nose polypi seem to be developed in two ways: first, in the production of

genuine granulation tissue, and from it, polypi; the other, by a thickening of the normal membrane gradually assuming the external form of a polyp. As thickenings occurring in the inferior turbinate and septum were never in any sense polypi, it suggested itself to inquire: first, into the differences in the structures between various regions of the nose; secondly, whether there could be any difference in the morphological constituents of the polypi produced with or by pus, and without; thirdly, what was the general relationship borne by the polyp of the middle ear to its mucous membrane; fourthly, whether there was not the same index of change to be noticed as takes place in the case of middle turbinate polyps, from the normal mucous membrane of the inferior turbinate to its nearest approach to a mucous polyp, the white pendulous posterior hypertrophies of the asthmatic or hay-fever subject, and, finally, if this were true, would it also be true that the fibro-myoxmata of other regions vary from the typical mucous polypi only in the same measure that a normal mucous membrane of that part did from that of the middle turbinate body?

Dr. Earle Terry Smith and Dr. Swain examined a large number of polypi: First, from all sorts of nasal cases, purulent and non-purulent, being extremely careful to always compare polypi of identical situations, and the finest histological changes were chronicled. Specimens were stained for possible micro-organisms in the tissues, as also for structure changes or peculiarities of the tissue-cells, and of the leucocytes. Second, antral polypi, ear polypi, posterior hypertrophies of the inferior turbinate, papillary polypi of the septum, fibro-myxomata of the larynx and of the epiglottis, polypi of the uterus and a fibroma moluscum of the skin were carefully examined and compared. The greatest number of specimens were examined with regard to the differences between pus cases and others, and only a trifling variation was discovered. No bacilli, or cocci, or parasitic bodies seemed to be present in the tissue, nor yet in the leucocytes. It has been observed that the blood of a patient, having a localized purulent process, almost invariably contains more leucocytes than normal blood. Why may not a purulent antrum be diagnosticated in this way? A section from the base of a non-purulent antrum polypi and that from an empyema case looked identical. The majority of ear polypi differed microscopically from their nasal brethren only in the character of the epithelial cells and tissues, and in the amount of fibrous and glandular tissue. There were sometimes more leucocytes present in pus cases in the substance of the polypi than in the non-purulent. In asthmatic cases, however, during paroxysms, there would be more leucocytes than in pus cases. Some

ear polypi are papillary hypertrophies of the mucous membrane; others are pure œdematous fibromata. He agrees with Jonathan Wright that certain nasal polypi have papillary corrigations on the surface, due to connective tissue, which contracts, forming the folds which characterize these growths. Such polypi contain a large amount of fibrous tissue. Other ear polypi are types of granuloma, and one finds all the gradations in different polypi from this simple form of tissues to the well developed conditions present in the usual œdematous fibroma; it apparently simply requires time to produce the necessary differentiation from a growth of young cells and blood vessels to the adult tissue. He emphasized the wisdom of leaving as smooth a surface as possible after operation, as any bits or tags of tissue left are liable to form a nucleus for the development of granulation tissue. In the middle turbinate such a simple knob of granulation tissue is liable to develop into an œdematous fibromata, which rarely ever has any ciliated epithelium. The transition being from the crudest form of covering to a mongrel flat epithelium, then to the ordinary epithelium found on the surface of polypi where they rub together or have lost their ciliated cells. Other structural changes occur by which the simple mass of blood vessels and cells receive an intercellular frame work. The young, round cells become fewer in number and we have a fine mesh work of reticular tissue, with spaces between the fibers, which are filled with a few cells and a semi-fluid substance. The blood vessels become fewer in number and are scarcely found except near the surface. This describes the typical mucous polyp which all clinicians meet. In pus cases, a granulation on the septum seems never to develop a polyp but becomes a solid knob of fibrous tissue covered with flat or layer epithelium. We all know that such knobs on the septum may resist persistently our efforts to reduce them.

He compared pendulous white hypertrophies with polypi.

The specimens examined seemed to prove that the tumors did not vary one from the other more than did the normal tissue of the parts producing the growth; the more dense and fibrous the tissue was, so was also its form of mucous polyp.

After discussing the difference of a hypertrophic condition of the mucous membrane and a polyp, he proved that polypi are purely inflammatory, and involved the pre-existence of a hypertrophic condition of the mucous membrane. The reason why one man has a polyp and the other not, under precisely similar local conditions, seems to lie in some inherent quality of his tissue.

Therefore a polyp is a symptom and not a disease.

As polypi increases in size, nature makes an effort to give them sufficient hold for heavier growth and, as the result, the intimately related periosteum becomes involved, and still later the bone itself. Hajek finds that, in most cases of pendulous hypertrophies of the middle turbinate, there sooner or later appears some participation in the diseased process on the part of the external periosteum. It becomes thickened, full of young proliferating connective tissue cells and leucocytes, and along the free edge of the bone osteoblasts are found later. These osteoblasts cause a deposit of new bone, frequently in the way of rough projections from the surface.

On the other hand, sometimes in the same subject, there is found quite an opposite process, namely: a resorption of bone substance, a so-called rarifying ostitis. Here, apparently, by some overcrowding of the marrow spaces, or of the sub-periosteal tissues, or by contraction of the fibrous tissue, which is always deposited where active connective tissue hyperplasia is going on, there occurs a complete absorption of the bone in such a way that small islands are cut off from the main mass and gradually disappear, or points, spiculæ, or projections occur from the surface of the bone, giving to the base of larger and older polypi a feeling of grating when a probe is pushed into the mass to see if there is any retention abscess. There is not a death and mortification of the bone, as must be understood by caries, but rather a mere rarifying or absorbing process. It would be easy for one to be led to believe that the bone changes were very general, but this is not the case. A specimen was shown, exemplifying in no uncertain way how frequently what we remove as single growths are really but dependent parts of a large hypertrophy; this mass brought away with it the bone upon which it had grown. The main bone was found healthy, the periosteum very much thickened, filled with young active tissue cells, and with every evidence of hyperplasia. There is also the beginning of the formation of the rows of osteoblasts, but no indication of any proliferating or rarifying ostitis. But the fact that the bone broke off so easily may mean that rarification has begun.

The speaker could only suggest as a reason why some patients get well and others do not, that the whole process is not dependent on too vitiated a constitution without too much of the neurotic element, and that the local process is not far advanced, or that our local treatment actually stops the local endo-rhinitis. In the second case, where for some reason they get well after endless repetition of the same measures, is that the cicatricial process finally so reduces the blood supply to the parts as to starve the more active inflammatory

productions, and the growth of the new tissue becomes less and less, the process stopping before it actually causes rarification or disease of the bone.

The evident clinical deduction from all the foregoing is that the sooner we get rid of the polyp the better; secondly, in our more chronic cases, if we can get rid of the whole diseased portion of the bone we shall have done the best we can for our cases. The latest laboratory work confirms the advisability of removing the anterior end, and sometimes larger portions of the middle turbinated bone.

BOOKS AND PAMPHLETS RECEIVED.

The President's address, delivered before the American Laryngological Association, at its Nineteenth Annual Congress. By Charles H. Knight, M.D. Reprint, *New York Medical Journal*, August 28, 1897.

Removal of the Drum-head and Malleus in Cases of Negative Rinné. By B. M. Behrens, M.D. Reprint, *International Medical Magazine*, May, 1897.

Three Cases of Obscure Laryngeal Disease—Tuberculosis, Syphilis, Epithelioma. By Charles H. Knight, M.D. Reprint, *Medical News*, June 5, 1897.

The Absolute and Permanent Cure of Tonsillitis. By Edwin Pynchon, M.D. Reprint, *Alkaloidal Clinic*, October, 1897.

Exostosis of the Septum as a Cause of Chronic Naso-Pharyngitis. By Charles H. Knight, M.D. Reprint, THE LARYNGOSCOPE, April, 1897.

BOOK REVIEW.

An Epitome of the History of Medicine.

By Roswell Park, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Illustrated with portraits and other engravings. One volume, royal octavo, pages xiv—348. Extra cloth, beveled edges, $2.00 net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia.

In the field of recent English medical literature this volume is quite a new departure. Its appearance will add another impetus to the study of medical history, presenting to the profession succinct information of a much-neglected department of our science. The material has been carefully selected, excellently arranged and presented in a classical style. The book is replete with copies of rare pictures and portraits, and is a valuable addition to the medical library.

About Children.

A series of lectures given to the nurses in the Training School of the Cleveland General Hospital. By Samuel W. Kelley, Cleveland. The Medical Gazette Publishing Company, 1897.

This is a well-arranged little volume, just the book for the professional nurse and the busy practitioner. A correct diagnosis in diseases of children is a difficult matter in many cases, and the long experiences of the author in pedistric practice furnishes many suggestions of value. The series of lectures are written in an interesting style and contain many original and practical points.

Relation of Food to Health and Premature Death.

By Geo. H. Townsend, LL.B., with the collaboration of Felix J. Levy, A.M., M.D., George C. Crandall, B.S., M.D., and H. G. Nicks, M.D. Cloth, 400 pp., $1.50. Witt Publishing Co., St. Louis.

This is a practical volume on foods, their properties, methods of preparation, incompatibilities, dietaries, idiosyncrasies and dietetic treatment of disease. The book is very comprehensive in character and specific in its treatment and aims to be an epitome of all scientific investigations of the subject matter. It is written in a popular piquant style and contains a vast fund of most useful information.

NEWS ITEMS.

Newberry Library Reception.

On Wednesday evening, December the 8th, the trustees of the Newberry Library, of Chicago, tendered a reception to Professor Nicholas Senn, who was the recipient of great honors during the Medical Congress in Russia. Dr. Senn has been a very generous donor to the Newberry Library, having given not only many books from his private collection, but he has purchased two foreign libraries of inestimable worth for this vast free library. The first large gift from Dr. Senn was the library of Dr. Wilhelm B. Baum, of Göttingen; the second, lately received, was the famous collection of Dr. Emil Du Bois-Reymond, of Berlin. To these collections Dr. Senn has added largely, from time to time, from his private library, including among his gifts the original manuscripts of some sixty works from his own hand. The medical profession is generally familiar with the working contents of this department, but few probably are aware of the rare and costly editions scattered through it, especially through the Senn collection.

Married.

Dr. Ralph J. Wenner was married on October 19th to Miss Adella Hollinger, of Sandusky.

Removals.

Dr. G. A. Ahret, from 38 Public Square to 89 Euclid avenue, Cleveland, O.

Dr. Leo Caplan, from 500 N. Jefferson avenue to 3104 Washington avenue, St. Louis.

Dr. P. T. Kilgour, from 704 Elm street to College Hill, Cincinnati, O.

Dr. J. B. Keber, from 707 Olive street to Century Building, St. Louis.

TRI-KRESOL-IODIN

In Rhinitis Chronica.

WILLIAM B. MEANY, M. D.

The pharmaceutic accuracy in the harnessing of a monad element of the Halogenous trinity—as in Trikresoliodin—places in the hands of the Rhinologist a delightful and efficacious ARMAMENTARIA. Trikresoliodin with its electro-negative radical of a haloid salt—Iodine; its great affinity for oxygen; its ready combining qualities with albumin—thereby preventing putrefactive phenomena—may be justly ranked amongst the true antiseptics, a FIBRIN solvent and a USEFUL, local stimulant or a mild irritant—exciting superficial inflammation—when used with ordinary judgment.

Trikresoliodin in my hands has proved to be a valuable therapeutic agent in "getting rid" of dry or atrophic and ulcerated areas in the mucus membrane, lining the NASO-PHARYX where "obstinate" and malodorous inspissated excretæ persisted in finding lodgment places.

The local application of Trikresoliodin appeared to afford a stimulative with sufficient "irritative" action to produce certain tissue metamorphosis in the mucus membrane to enable the diseased structure to take on a local healthy action.

Trikresoliodin should prove useful in hypertrophied tissues of a mucus membrane; in trachomatous conditions, polypoid growths, glandular engorgments and local tuberculous affections, when judiciously exhibited, either locally, hypodermically or electrolytically.

3907 West Belle Place.

We would respectfully ask our subscribers to remit the amount of their subscription as soon as possible. The expense attached to publishing the THE LARYNGOSCOPE is very great.

In remitting, kindly send New York, Chicago or St. Louis draft, post-office money order, or express money order, or add 15c to the amount sent, in order to pay cost of collecting check.

The Editors.

TWELFTH INTERNATIONAL MEDICAL CONGRESS.

Moscow, 7 (19) 14 (26) August, 1897.

SECTION XII b. LARYNGEAL AND NASAL DISEASES.

ORGANIZING COMMITTEE: *Administrator.*—E. M. Stepanoff, prof. agrégé, Moscow. *Secretary.*—A. F. Belayeff, d-r, Moscow.

Members of Committee.—D-r G. N. Boyeff, Moscow; d-r A. F. Belayeff, Moscow; B. V. Verhovsky, prof. agr., St.-Petersburg; N. M. Volkovitch, prof. agr., Kiev; d-r A. E. Haudring, Moscow; d-r T. E. Heryng, Warsaw; M. M. Lomikovsky, prof., Harkoff; V. N. Nikitin, prof., St.-Petersburg; K. A. Rauchfuss, head-doctor of Prince Oldenburg's hospital for children, St.-Petersburg; N. P. Simanovsky, prof., St.-Petersburg; d-r A. J. Sokolovsky, Warsaw; d-r M. A. Frohnstein, Moscow; d-r G. N. Scott, Moscow; d-r A. V. Jacobson, St.-Petersburg.

The Organizing Committee of the Section of Laryngeal and Nasal Diseases of the Twelfth International Medical Congress has the honor to invite you to take part personally in its proceedings.

In accordance with § 17 of the Statutes of the Congress the meetings of the Section are to be specially devoted to the hearing and discussion of reports on subjects previously chosen by the Committee. All the time remaining unoccupied is assigned to private papers on subjects chosen according to the discretion of the reporters themselves.

Many well known specialists, whom the Committee had requested to accept the office of official reporters, have replied so graciously to its invitation that the complete execution of the official programme may be regarded as fully ensured.

The following is the programme of the proceedings of the Section;

1. Suppuration of the Nasal Accessory sinuses (except the maxillary), their diagnosis and treatment (Dr. E. Moure, Bordeaux; Dr. M. Hajek, Vienna.)
2. Cancer of the Larynx, its diagnosis and treatment, Prof. O. Chiari, Vienna; Dr. G. Catti, Fiume.
3. The causes and treatment of loss of voice in singers, Prof. H. Krause, Berlin; Dr. M. Lermoyez, Paris.
4. The progress made in the treatment of Laryngeal Tuberculosis since the last International Congress, Dr. Ruault, Paris, Dr. J. W. Gleitsmann, New York.
5. Laryngo-stroboscopy, Prof. Simanowsky, St. Petersburg.
6. The use of the X-rays in Laryngo-rhinology, Dr. I. Macintyre, Glasgow; Dr. Mount-Bleyer, New York.
7. Oesophagoscopy, Prof. V. Hacker, Innsbruck.
8. The adaptation of Photography to Laryngology, Dr. I. R. French, Brooklyn; Dr. Flatau, Berlin.

Besides the above, it is proposed to arrange a joint meeting with the other Sections on the question of Serum treatment of diphtheria.

The Committee ventures to hope that you will consent to communicate the results of your observations and investigations as regards the subjects mentioned above, as well as any other subjects pertaining to our special branch.

We beg you to furnish us, not later than the 1st of June (No. 8), with the titles of your intended communications, with a detailed résumé of their contents, in order that both may be got out of the printer's hands in good time.

We remain, sir, yours respectfully,

E. STEPANOFF. A. BELAYEFF.

.....1897.

Publishers "THE LARYNGOSCOPE" (Devoted to Nose, Throat and Ear Diseases):
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A Case of Otitic Pyæmia Cured by Excision of the Thrombosed Internal Jugular Vein.

Dr. H. Eulenstein, Frankfort A. M.

In operating upon a male, 25 years old, for mastoid disease, following a chronic suppurative otitis, the author found a large perisinuous abscess. He found the sinus walls discolored and covered with granulations. The posterior cerebral fossa was also exposed. Near the jugular foramen the sinus wall gave way, giving exit to a large amount of pus. Owing to loss of blood, the operation was ended and the cavity packed in the usual manner. Chills, together with bloody expectoration, was observed, with negative pulmonary findings.

A slight jaundice developed. The jugular vein was exposed at the level of the thyroid cartilage, but it was found to be of a whitish color. It was soft with no evidence of periphlebitis. It was ligated as far down as where it empties into the rimorninate and then was excised. Culturas from the thrombus showed streptococci predominating. Several chills followed the excision, and a number of abscesses appeared on the left side of the face, indicating a thrombo phlebitis of the facial. The patient, however, made a good recovery.

A New Method of Treating Deafness.

Dr. Cohen Kysper, Hamburg.

The author introduces into the middle ear solutions of ferments, which have the power to dissolve albumen, for the purpose of inducing a process of digestion of the hyperplostic material as well as of the connective-tissue products, which follow catarrhal and suppurative manifestation of the tympanic cavity. For this purpose he employs a chemically pure solution of dogs pepsin, which has been passed through a bacteria filter. The solution should contain about 15 per cent. of hydrochloric acid.

His experiments were made upon the cadaver. Fluid gelatine was injected into the tympanium, allowed to solidify, and the dissection then made in order to determine the action of the different methods of injection.

The injection is to be made as near as possible to the stapes—i. e., posterior to the manubrium mallei, in its upper half, or between the rim of the drumhead and the descending limb of the vicus, if same can be seen, and the space is sufficient to make the puncture. In this manner the niche of the fenestra ovalis with the spaces will always be filled by the injection. Sometimes the fluid injected forces open the eustachian orifice (tympanic) and portion of same passes into the throat. To avoid this, and to give exit to air and superfluous fluid, the author makes a contour opening above the injection puncture.

The amount of fluid which is necessary to cover the stapes (in the cadaver) is from *one-half to one decigramme.* The author employs from two to three decigrammes, according to the size of the drumhead. It is advisable to warm the solution, taking care to avoid too high a temperature for fear of destroying the pepsin. The head of the patient should be on a low pillow and turned to the opposite side, and should so remain for about an hour after the injection.

A modified Koch syringe is employed, with the canulo bent at an angle. A piece of rubber between the bulb and glass syringe is necessary to steady the instrument. It is important that the first injection should be successful, as a repetition cannot be made at once, owing to the danger of excessive irritation. In the author's opinion an interim of several months should occur before another attempt is made. The strip of cutis descending from the upper wall of the meatus should be avoided in giving the injection, as that portion of the skin carries the large blood vessels, and hemorrhage is to be avoided on account of neutralizing the solution.

The author states that an actual digestion of cicatricial tissue takes place. This is explained by the improvement in hearing within an hour after the treatment. "In some cases the procedure is quite painful, and narcosis is frequently necessary. Otherwise it is free from danger, and beneficial in the majority of cases." He further emphasizes the fact that this form of treatment is as yet a therapeutic experiment.

Index to Advertisements.

Pneumonia Following La Grippe.

BY M. E. CHARTIER,

Docteur en Medecine de la Faculte de Medecine de Paris, Membre Correspondant etranger de la Grande Encyclopedie, Section de Philologie.

As a rule certain diseases prove more fatal, not only in given districts, but during certain periods of time, along particular areas of territory. We have La Grippe, decreasing in intensity for the present; it has been replaced by pneumonia, which is not only raging in the United States, but in European countries. The bacteriologists will have to explain this fact; the truth remains however, that the mortality from pneumonia in its various forms is now far in excess of any previous record.

Twenty years ago, and preceding the re-appearance of La Grippe in its epidemic form, pneumonia proved as dangerous as it does at the present time. Many cases fell under my personal observation, and I must admit that my Parisian confreres were at a loss, not for a remedy for the disease alone, but even for a logical line of treatment. Dujardin-Beaumetz became so skeptical that he prescribed stimulants, regardless of therapeutical conditions. The mortality in his ward at the Hotel Dieu proved that his patients fared no worse than the others submitted to the antiphlogistic remedies then en vogue.

At that time, I advocated in my treatise on therapy, the administration of sulphate of codeine in two to five centigrammes doses—one-fourth to one-half grain. Codeine is the only remedy known to me possessing a marked and distinct effect upon the hypersecretions of the bronchial mucous membrane. What I then wished was an analgesic possessing antipyretic properties, which I could safely use. This I have since found in antikamnia and I believe it can be exhibited safely, especially on account of its not having a depressing effect on the cardiac system.

Experimental doses of from one-half to one gramme—seven to fifteen grains—of antikamnia administered under ordinary conditions did not develop any untoward after-effect. The following trace, taken with the sphygmograph was made ten minutes after the administration of one gramme—fifteen grains—of antikamnia.

Pulse, 112. Temp., 101 1-5 Fahr.

The above trace shows plainly that unlike other coal-tar products, antikamnia has a stimulating effect upon the circulation. In this particular case the temperature was sensibly reduced—102° to 101 1-5°. The analgesic effect of the drug was satisfactory.

My conclusion is that in the treatment of pneumonia, antikamnia is indicated as a necessary adjunct to codeine, on account of its analgesic and antipyretic properties and particularly because it acts as a tonic upon the nerve centres. The tablets of antikamnia and codeine containing four and three-quarter grains antikamnia and one-fourth grain sulphate of codeine, to my mind, present these two remedies in the most desirable form. I also find one tablet every hour, allowed to dissolve slowly in the mouth, almost a specific for the irritating cough so often met with in these complications. For general internal medication, it is always best to crush the tablets before administration.

PUBLISHERS' DEPARTMENT.

Electric Converter.

We take pleasure in calling the attention of our readers to the new advertisement by the A. S. Aloe Co., of St. Louis, of their excellent electric converter. This is an indispensable apparatus to the ear, nose and throat surgeon, and can be recommended to give absolute and general satisfaction.

Valuable Remedies Worthy of Attention.

Especially at this season are the tablets of "Antikamnia and Codeine," each containing $4\frac{3}{4}$ grains antikamnia and $\frac{1}{4}$ grain sulphate codeine, worthy of attention in the treatment of pulmonary diseases. This combination is a sedative to the respiratory centers in both acute and chronic disorders of the lungs. Cough, and in fact nearly all neuroses of the larynx are in the vast majority of cases promptly and lastingly relieved, and often entirely suppressed. In the treatment of la grippe and its sequellæ, its value is highly esteemed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve; this combination does this, and in addition controls the violent movements accompanying the cough. To administer these tablets in the above conditions, place one tablet in the mouth, allowing it to dissolve slowly, swallowing the saliva.

Lactophenin is Perfectly Safe.

In his exhaustive chapter on tuberculosis, in Wilson's American Text Book of Applied Therapeutics, Prof. James T. Whittaker, of Cincinnati, compares the antipyretics at various stages of treatment, and always speaks most favorably of Lactophenin. Thus, in mentioning methods for lowering the temperature (p. 376), he says that salol is safer than acetanilid, antipyrin or phenacetin, "but as it liberates carbolic acid in the intestine, it should not be given in any case of stasis of the kidney;" and then he adds: "Lactophenin in the same dosage (5 to 7 grains) is efficacious and free from danger." To quiet pain (p. 384) "sometimes due to a toxic neuralgia," salol is safer than either phenacetin or antipyrin (the latter in large doses, depressing the heart), while Lactophenin is a perfectly safe drug in the same dose (5 grains every two hours)." This view is in accord with the judgment of the many reporters, that Lactophenin is the safest of all the newer antipyretics.

OPINIONS REGARDING THE LARYNGOSCOPE.

"You are giving us a fine journal, and I shall be happy, in my humble way, to contribute to its success in any way that I can." CHAS. M. COX, Brooklyn.

"I wish to compliment you upon the success of your undertaking, for you must surely have surpassed even your own expectations." M. R. WARD, Pittsburgh, Pa.

"It certainly represents the subject in a concentrated form, and for this reason is superior to other journals for the man who is interested in diseases of the nose, throat and ear."

WM. F. CLEVENGER, Indianapolis.

"THE LARYNGOSCOPE is a great success, I could not do without it." L. C. CLINE, Indianapolis.

Index to Advertisements.